1925

SAWARD'S ANNUAL

By FREDERICK W. SAWARD

Compliments of the Author

SAWARD'S ANNUAL

A STANDARD STATISTICAL REVIEW OF THE COAL TRADE

Embracing Details Relative to Output, Prices, Freight and Wage Rates, Transportation, Exports, Trade Conditions, Computing Tables, and Other Details of Importance to the Coal Man, Wholesale and Retail

BY

FREDERICK W. SAWARD

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COAL PRODUCTION OF THE UNITED STATES.

The U. S. Geological Survey has so perfected its system of estimates of coal production that early returns of particular accuracy are now available. We accordingly present the Survey's figures for 1924 as officially announced, showing for comparison the actual output for four preceding years as recorded at Washington.

It will be noted that the production of anthracite is recorded, this being an amount materially greater than the shipments, more commonly used as the basis of trade statistics.

Bituminous	1920	1921	1922	1923	1924
Pennsylvania	168,083,847	116,013,942	113,148,308	171,879,913	123,530,000
West Virginia	89,450,707	72,786,996	80,488,192	107,899,941	110,000,000
Illinois	88,630,893	69,602,763	58,467,736	79,310,075	67,880,000
Kentucky	35,528,762	31,588,270	42,134,175	44,777,317	45,000,000
Ohio	45,032,653	31,942,776	26,953,791	40,546,443	29,200,000
Indiana	29,090,585	20,319,509	19,132,889	26,229,099	22,340,000
Alabama	16,140,099	12,568,899	18,324,740	20,457,649	19,490,000
Virginia	11,244,106	7,492,378	10,491,174	11,761,643	10,900,000
Colorado	12,274,225	9,122,760	10,019,597	10,346,218	9,840,000
Wyoming	9,623,271	7,200,666	5,971,724	7,575,031	6,850,000
Utah	6,005,199	4,078,784	4,335,161	4,720,217	4,460,000
Iowa	7,774,916	4,531,392	4,876,774	5,710,735	5,100,000
Tennessee	6,585,628	4,460,326	2,955,170	6,040,268	4,800,000
Kansas	5,838,408	3,466,641	4,992,008	4,035,404	4,150,000
New Mexico	3,683,440	2,453,482	2,802,511	2,915,173	2,550,000
Oklahoma	4,830,288	3,362,623	2,924,750	2,885,038	2,800,000
Montana	4,403,866	2,733,958	2,572,221	3,147,678	2,700,000
Missouri	5,266,565	3,551,621	2,581,165	3,403,151	3,140,000
Washington	3,753,093	2,428,722	3,147,173	2,926,392	2,400,000
North Dakota	907,625	864,903	1,327,564	1,385,400	1,090,000
Maryland	4,030,239	1,827,740	1,222,707	2,285,926	1,720,000
Texas	1,615,015	972,839	1,106,007	1,187,329	1,075,000
Arkansas	2,050,596	1,227,777	1,110,046	1,296,892	1,300,000
Michigan	1,487,765	1,141,715	929,390	1,172,075	820,000
Georgia	50,156	33,815	60,636	261,910	145,000
Oregon	20,717	*	*		
California	2,753	38,845	26,893		
South Dakota	12,777	7,553	7,752		
Total net tons	563,734,383	415,921,950	422,268,099	564,156,917	483,280,000
Anthracite	89,598,249	90,473,451	54,683,022	93,339,009	90,000,000
Grand total net tons	653,332,632	506,395,401	476,951,121	657,495,926	573,280,000

*Included in California.

In 1923 the railroads received as freight revenue from all classes of commodities a total of $4,624,399,000, of which coal and coke shipments comprised $1,147,937,000, or 24.8 per cent. This was divided as follows: Bituminous coal, $856,242,000; anthracite coal, $226,933,000; coke, $64,762,000.

THE YEAR IN RETROSPECT

Dissimilarity of Anthracite and Bituminous Circumstances Noticeable —Soft Coal Sinks to Lowest Possible Levels.

The year 1924 went on record as the worst period for soft coal in a generation or even more. The unfavorable results are only comparable with those of the period 1894 to 1896. Over-development of mining and increase in the number of middle-houses concerned in the trade joined with a lack of substantial increase in demand to bring about a highly competitive, ill-paying business condition.

Anthracite had a good year save for the difficulty experienced by some operators in moving their steam sizes. This is a situation always presenting some difficulties, and in the period under consideration it was made more pronounced by low soft coal prices. Fortunately, so far as domestic sizes were concerned, there was a normal demand that took all the mines shipped and so far as that branch of the trade is concerned no more than ordinary commercial difficulties were experienced during the year.

No effect of the 1922 strike carried beyond the early part of 1923, and notwithstanding the large tonnage used during the preceding winter the price of soft coal kept dropping until early summer of 1924. The movement from the mines was on a high level throughout the colder portion of the winter season, but with the approach of spring the tonnage as well as prices declined, the low point in output being reached in April.

Anthracite returned to a more normal condition in 1924. There was a good tonnage produced and there was no general strike, though many local ones hampered mining activity, the number being semi-officially stated at more than 100. There was noticed a tendency to increase prices here and there on prepared sizes; a steady premium on stove coal prevailed throughout the year, excepting in March and August. At times independent operators were able to obtain premiums on other coal also; a course made necessary by the poor results on steam sizes, the leading producers having reduced the prices of buckwheat and rice fifty cents April 1st. Later in the season, both stove and chestnut were advanced by certain large operating and selling interests.

Wage Agreement a Huge Blunder.

The great event in soft coal history during the year was no doubt the Jacksonville wage agreement entered into in February between representatives of the operators and the miners. This avoided a strike and governmental intervention, but also diverted much business to non-union fields which cut prices and also suffered as a result of competition and low market values. The outcome sustains the saying of union officials to the effect that the benefit of reduced prices is given to the consumers, and consequently is of little value in expanding the tonnage of coal produced, in the aggregate, or the extent of operators' profits.

This condition develops often enough to give point to comment that, like many other sayings, has its limitations. Yet it is remembered that there was trouble with regard to unfair competitive conditions when the union rate was 40 cents a ton, and there always will be some interests that surmise that they could do vastly more were their costs a little lower. Of course, there are today a few districts like Central Pennsylvania and Illinois that are under peculiar disad-

vantages, but aside from them it is well to bear in mind that non-union producers very generally keep their costs below union operators except in times of great labor shortages; and probably always will.

The demand for soft coal fell off when it was seen there was to be no strike and the smaller industrial use that developed as the political campaign got under way caused large stocks to accumulate. Persistent selling kept them large throughout the summer. With the arrival of Labor Day, the demand increased and there were a few weeks of more favorable business conditions. Election Day gave industry a notable start towards better things, but there was little reflection of the improvement in soft coal circles.

Rarely, if ever, has selling been attended with such difficulty as during the year 1924. An important coal man declared early in the year, "The pie is cut into too many pieces," and competition for business resulted in small sales for the majority of houses. It is noticed at such times that modern sales helps intensify competition. If a certain group of houses had a monopoly on telephone service, mimeographing, typewriting and automobiles for salesmen, they would have the edge on competition, so to speak, but when practically all houses utilize all available means for drumming up trade, there is not much distinction or advantage.

In soft coal production there are customarily ups and downs, periods of active demand, periods of scant demand and strike years, so that the average for a certain term is by all means the best way of sizing up the situation. A ten-year or even a five-year period probably introduces too many dissimilar factors to make a fair average, but taking three years together there is generally a fair distribution of good, poor and fair years.

Calculating that is the best way, we find that the average for the period 1909 to 1911 inclusive was 460,920,666 tons. For the next three years, 450,514,000. For the next 498,977,666, while for the next three years the figures amounted to 537,911,333. It will be seen that the rate of progress attained in relatively recent years has not been kept up of late and in fact when we go back a little further we find that there was an increase of 146.5 per cent for the decade 1870 to 1880; 159.8 for the next decade; 90.7 per cent for the next, and 96.4 per cent for the term ending 1910, an average of 123 per cent for each decade.

Were this rate of increase to be projected without deviation, it would strike the fantastic figure of 1,100,000,000 in the year 1925.

Wonderful Progress in Past.

It was such a record that pulled up the soft coal tonnage from only 17,371,305 in 1870. It will be seen that there has been a notable slowing down, an unprecedented curtailment, which has put a different aspect upon the trade, once forging ahead with giant strides.

The busiest period of 1924 was the months January and February and September and October. A notably dull period extended all the way through from April 1st to August 1st. The summer witnessed an average tonnage of only about 7,000,000 tons per week, a rate which, if continued for a year, would put us back on the basis of 1908 or thereabouts. And as it is, the trade seems to have lost about ten years' growth.

The output suffered as a result of oil competition in all places, north, east, south and west; also from economies and concentration of use at power houses.

More hydro-electric power played its part and there was less export trade than usual. Consumer-owned mines are also recognized more and more as large factors in decreasing commercial business. The Ford exploits in this direction have attracted attention during the past two years, and there seems to be a tendency for certain interests with large capital to follow the same policy.

The course of seaboard prices may be gleaned in a general way from certain quotations on Pool 9 coal from Central Pennsylvania. January 1st these stood at $2.10 to $2.50; April 1st, $2.00 to $2.40; July 1st, $1.90 to $2.25; October 1st, $2.00 to $2.30, and December 1st, $1.90 to $2.25. Pool 1 or Navy Standard coal at Hampton Roads fluctuated as follows: January, $4.70-$5.00; April, $4.20-$4.30; July, $4.30-$4.35; October, $4.50-$4.75. In the Chicago market, Southern Illinois mine-run coal was quoted as follows: January, $2.50-$2.75; April, $2.50-$2.75; July, $2.50-$2.75; October, $2.50.

Few Eliminations.

The profits achieved in the soft coal trade during the year were made mostly by large interests with public service contracts taking a good portion of their output. Large losses resulted where high cost mines attempted to run on spot business. Many plants were shut down, but notwithstanding predictions, few companies were eliminated and no mines were actually abandoned. Coal concerns generally exhibit commendable tenacity in holding on in dull times, and worthwhile mines cost too much to be given up while there is any hope at all for the property.

A curious situation prevailed in West Virginia. The high-grade non-union fields had difficulty in moving coal at a profit. There has certainly been a free play of the law of supply and demand, and this time, notwithstanding the merits of the fuel, conditions favored the buyer at nearly all times during the year.

There has certainly been a great contrast compared with the situation four years ago, there having been practically a steady decline in profits throughout the years 1921 to 1924, inclusive, excepting for those periods of 1922 and 1923 when strike effects were apparent. The trade in fact got down to a serious point. All the old-time troubles have been brought to the front again and many disadvantages have been revived. As a result, some of the primal elements of human nature have been brought to the surface, as in warfare, and the period has not been a pleasant one for many of those engaged in the trade.

So far as commercial history is concerned, there are few outstanding features aside from the market conditions. No large new companies entered the field, though several small ones put their names before the buying public. There was an unusual amount of disorder in the Fairmont field by reason of a breaking away from the union. Some of the Kanawha operators succeeded in starting on a non-union basis, but in Fairmont the effort was successful only to the extent of about fifty per cent. Numerous wage reductions have been made, either directly or by modification of working rules which have the same effect.

Decrease in Export Trade.

While it was expected that off-shore business would show an improvement through reflection of increased cost of English coal in foreign markets, not much was achieved in this direction. The real export trade, aside from Canada and other nearby points, was about 3,000,000 tons, as compared with a total of

more than 17,500,000 tons in 1920, in which year Europe took 13,000,000 tons, South America, 3,500,000 tons, and even Africa was down for 1,000,000 tons. There was, therefore, a loss of about 15,000,000 tons of new business, most of which moved at very good prices.

Railroad service is a factor very intimately interwoven with the coal trade. Throughout the year it was on a basis too good to please many of the operators. No congestion developed to help the situation. Coal was ever available and the result is well known by all. How greatly the railroads have increased their coal-carrying capacity is indicated by the fact that the Chesapeake & Ohio and Norfolk & Western now haul in a good month as much as they hauled in twelve months some twenty-five years ago; this notwithstanding the building of the Virginian Railway in the same territory.

Prepared Sizes Very Strong.

Anthracite continued to show the contrast between market conditions for large coal and small coal that has become so much of a feature in recent years. Most of the time, prepared sizes were very strong. Egg was weak in the first part of the year and also in the last few months, but aside from that, conditions were favorable.

Steam sizes, on the other hand, were weak all the time except in the case of a few companies specially favored by contracts, often of long standing, which permitted them to move their output of small coal. The conditions placed a heavy burden of cost on domestic sizes, a situation that reduced the apparent profit of the independent operators and must always be taken into consideration when one is tempted to calculate what is made on selling stove coal at $10 or more per ton at the mines.

Wage rates were not changed, but continued at so high a level as to cause careful consideration all along the line and even as they now stand, affording remunerative employment to a vast body of men, there is dissatisfaction which frequently leads to outbreaks, most of which do not even have the sanction of the miners' organization.

From being a cheap fuel, anthracite has become a dear one. The old rates were too low, but the present are mildly termed "all that the traffic will bear." The plane upon which values have now been established constitutes a problem for operator, middleman and dealer, as well as the consumer.

Price changes are perhaps best illustrated by the movement of stove coal quotations as fixed by independent operators. There are, of course, variable factors to be considered, as for instance whether the tonnage is sold straight or in combination with other sizes, this leading to much variation in the quoted prices, but quotations on straight stove illustrate the general market tendency fairly well and as such may be quoted as follows: January 1st, $10-$10.50; March 1st, $9.25-$9.50; April, $8.75-$9.00; October, $10.25-$10.75; this was the high figure of the year.

In like manner No. 1 buckwheat from independent sources might be quoted as follows, as showing the range of steam coal prices during the year: January, $2.25-$2.75; February, $2.25-$2.75; March, $2.00-$2.50; April, $2.25-$2.75; May, $2.35-$3.00; June, $2.15-$2.65; July, $2.00-$2.40; August, $1.85-$2.25; September, $2.25-$2.75; October, $2.25-$2.75; November, $2.00-$2.50; December, $2.00-$2.25.

Excessive Number of Strikes.

Considering the favorable agreement of September, 1923, there were an excessive number of strikes in the hard coal fields. These were by no means due to adverse working conditions in all cases, but were influenced in part by union politics, unrest among the men and radicalism among certain active leaders. It is generally considered that they reflected little credit upon the organization. One great advantage of unions is that, when well managed, they afford a definite, responsible body with which to deal in the fixing of wages and of working conditions. But when there is a failure to observe agreements and obligations, when they bind only one party to the contract, it is manifest that there is something wrong.

In considering the anthracite situation, which was so much better than the bituminous situation throughout the year, one is apt to conclude that some element of exaggeration is present. In the summer it was said that business was unsatisfactory because of light buying, and in the fall a similar number of people referred to the dullness prevailing because so much coal was sold in the summer. As a matter of fact, there is only a small variation in the volume of business at any time. The hard coal trade moves with remarkable uniformity month by month.

Efforts to Use Small Coal.

It is interesting to note the experiments in regard to briquette making as a means of moving the steam sizes, and also another proposition working along the same line but avoiding in its literature the use of the word which has had an unfortunate career as a commercial feature in this country, although the product so designated is well accepted throughout Europe.

Small coal is an inevitable result of anthracite mining and preparation, and its use on a large scale at a fair rate of compensation to the producer is a necessity. The fact that certain stokers operate successfully with barley results in that being in good demand, but all sizes should be availed of, for the easily accessible coal, the cheaply mined product of the Pennsylvania fields, is largely gone. Even at the 1874 wages, coal would be more expensive today, and no longer can producers afford to put on the culm bank the fuel that was thrown away 50 or even 25 years ago.

Notable features for the year were the falling off in the demand for egg coal at points east and for pea coal near the mines. As a result, many dealers became loaded up with those two sizes. Pea coal especially is hard to move at distant points, for with the freight added there is not enough proportionate saving on it, while egg encounters competition in a special sense from other fields.

Some Tonnage Figures.

As to the distribution of tonnage, it can be said that the lake trade was rather light, Buffalo shipments amounting to 2,616,550 tons as against a high record of 5,033,606 tons in 1913 and an average over the past two decades of about 3,430,000 tons. To these figures can be added about ten per cent for shipments from Erie and other minor ports.

Movement to Canada was also somewhat curtailed, although not to the same extent. The year's total was 3,500,000 tons, as against 5,525,185 in 1913, the banner year, and an average up to 4,000,000 tons in the intervening time.

Shipments from the mines month by month are no longer reported, but an idea of the volume of business can be obtained from the figures of coal produced, this being reported in net tons and including local sales as well as colliery use. On this basis the tonnage may be put at something more than 90,000,000 tons for 1924, equivalent to 69,300,000, or thereabouts, gross tons of shipments. This compares with 72,668,621 tons in 1923, 77,133,305 tons in the best year on record (1917) and 66,855,462 in 1919, which was the most recent low figure non-strike year.

With the high price of labor prevalent for so long a time in the hard coal fields, the year's results may be said to have hinged largely upon the cost of mining. The high cost mines have had a struggle. Others have done better in proportion as their expenses were lower. With the retailers, the advantage has been with those who were able to take in and carry without undue stress and strain a full supply of circular price coal.

Segregation plans under which the Lehigh Valley and the Philadelphia & Reading coal and railroad properties were definitely separated were achieved during the year. The end has now been reached practically, by the separation measures instituted years ago to part the coal and railroad interests, but one may well ask what benefit to the public has resulted.

Notable Mine Accidents.

Coal mine disasters in the United States in which 100 or more men were killed:

	Date	Name of Mine	Location of Mine	Killed
1869	Sept. 6	Avondale	Plymouth, Pa.	179
1884	Mar. 13	Laurel	Pocahontas, Va.	112
1891	Jan. 27	Mammoth	Mount Pleasant, Pa.	109
1892	Jan. 7	No. 11	Krebs, Okla	100
1900	May 1	Winter Quarters Nos. 1 and 4.	Scofield, Utah	200
1902	May 19	Fraterville	Coal Creek, Tenn.	184
1902	July 10	Rolling Mill	Johnstown, Pa.	112
1903	June 30	Hanna No. 1	Hanna, Wyo.	169
1904	Jan. 25	Harwick	Cheswick, Pa.	179
1905	Feb. 20	Virginia City	Virginia City, Ala.	108
1907	Dec. 6	Monongah Nos. 6 and 8	Monongah, W. Va.	361
1907	Dec. 19	Darr	Jacobs Creek, Pa.	239
1908	Nov. 28	Rachel and Agnes	Marianna, Pa.	154
1909	Nov. 13	St. Paul No. 2	Cherry, Ill.	259
1911	Apr. 8	Banner	Littleton, Ala.	128
1913	Oct. 22	Stag Canon No. 2	Dawson, N. Mex.	263
1914	Apr. 28	Eccles Nos. 5 and 6	Eccles, W. Va.	181
1915	Mar. 2	Layland No. 3	Layland, W. Va.	112
1917	Apr. 27	Hastings	Hastings, Colo.	121
1923	Feb. 8	Phelps Dodge Mine No. 1	Dawson	120
1924	Mar. 8	No. 2 Mine	Castle Gate, Utah	173
1924	Apr. 28	Benwood Mine	Benwood, W. Va.	117

THE YEAR 1924 AT NEW YORK

Fairly Good Results in Anthracite Despite Periods of Dullness—Bituminous Producers and Wholesalers Have Hard Struggle.

For those engaged in the mining and distribution of anthracite, 1924 has been a year of fairly good results in a financial way. Production figures indicate a normal volume of business, and while of course the profits of different interests will show the usual variation, they too will probably average up well with past years.

This has been achieved in the face of difficulties and drawbacks that have caused a lot of complaint at times. For one thing, the demand for sizes was out of balance at all times and seriously so for considerable periods. Stove and barley are the only two sizes that have given the producers no trouble to speak of. The former has been in short supply almost continually, while the demand for the latter has just about equalled the available tonnage, which was reduced this year on account of many washeries being idle.

A surplus of egg coal existed except for a few months in the spring and summer. At other times nut was in oversupply. Pea coal has been a drug on the market throughout the year, and No. 1 buckwheat for a good share of the time. Rice was absorbed reasonably well, and the output of broken coal is kept down to the requirements of the few users of that size.

In the late winter, and again late in the summer, premiums on independent tonnage disappeared for a few weeks. The rest of the year this class of producers were getting more than the company circulars on a portion of their output. As against this is the fact that some sizes were selling below the company price all the time and other sizes part of the time.

Early in the year the trade had to contend with a winter that was unseasonably mild until February, and when cold weather finally arrived it was too late to do much good except to help the retailers reduce their stocks in anticipation of the April 1st price reductions. Most of the companies did not follow their old-time practice of making a flat cut of 50 cents on all domestic sizes, but the reductions varied from 15 to 60 cents. Likewise, the advances made on the first of each subsequent month until September showed a lack of uniformity. Usually stove and nut took a greater advance than egg, while pea coal, which was reduced at least 50 cents a ton on April 1st, continued to sell at the April price for the remainder of the year.

A 50-cent reduction was made in the price of No. 1 buckwheat on April 1st by most of the large producers. Some of them cut also rice 50 cents and others made a 25-cent reduction on that size. Barley remained unchanged at $1.50 a ton, as it was moving well at that price.

During the year the companies had to stock considerable buckwheat, and smaller quantities of pea and rice. Some of them also had to put a little egg and nut on the ground at various times, though when the demand picked up these accumulations were reduced.

On two occasions during the year—in February and March and in August—some of the companies and independents found it necessary to curtail production slightly to avoid an excessive accumulation of certain sizes. But on the whole the market absorbed tonnage reasonably well, as is evidenced by the fact that the

1924 production is only between 3,000,000 and 4,000,000 net tons below that of 1923. And part of this loss was in the production of washeries, which operated irregularly owing to the poor demand for buckwheat.

Retail dealers have probably made average profits, as a rule, although as the year closed many of them were carrying heavy stocks.

Course of the Bituminous Market.

While the year is considerably ahead of 1921 from a bituminous tonnage standpoint and shows a production about equal to 1919, it is commonly spoken of in the trade as being worse than either of those years when it comes to comparing profits and losses. And those were the poorest post-war years with the possible exception of 1924.

Whatever may have been the relative amount of business done in red ink during the several periods mentioned, it is a fact that the lack of adequate profits in 1924 had been more severely felt than in the earlier years. During the war most coal companies made money enough to tide them over the ensuing depression, and in like manner the huge earnings piled up in the boom of 1920 made the hard times of the following year less acutely felt. But in 1924 there were no such mitigating circumstances, no large surplus having been carried over from 1923, which was a year of small average profits in spite of good-sized income tax payments made by certain interests who enjoyed peculiar advantages.

For all this, it is noteworthy that comparatively few companies failed or retired from business voluntarily. This suggests that there is an element of exaggeration in the reports of business being done at a loss, but it is unquestionably true that earnings were not what they should have been. Moreover, in order to keep afloat it was necessary for many companies to resort to all kinds of economies, such as the closing of branches, the reduction of sales and clerical forces, moving into less expensive offices, etc.

Union operators in Central Pennsylvania, the bituminous mining region most closely associated with this market, have had a particularly hard time of it because of non-union competition. More than half the mines owned by these producers were idle a good part of the year. Wage reductions in Somerset County and other unorganized fields enabled the operators there to sell their coal at a price which gave them a virtual monopoly of highly competitive business. When operators paying the union scale succeeded in retaining a portion of their trade it was because of the quality of their product or firmly established relations with certain buyers.

Even the non-union producers had to operate on reduced time for a portion of the year because, regardless of price, there had not been a market for all the coal they could turn out if working at full capacity. Overdevelopment of mining properties and industrial depression both played a part in preventing steady operation even at low-cost mines. Lack of demand was rendered more pronounced during the spring and summer by the existence of abnormally heavy stocks at consuming plants. These were accumulated prior to the Jacksonville wage agreement, signed in February, when there was talk of a strike on April 1st. When this danger was averted, buyers began digging into their stocks for current requirements and for several months buying was extremely light.

Toward the end of August business began to pick up. In September and during the first half of October it was comparatively good, but with stocks re-

plenished the market then became less active. Prices firmed up a little early in the autumn, though the gain did not amount to much.

Wholesale dealers in bituminous had a lean year, not only because of competition among themselves but on account of operators soliciting business direct from consumers to a greater extent than is sometimes their practice. This deprived the wholesalers of a certain amount of business and also made it necessary for them to operate on very narrow margins. Buying and selling between houses, which is quite a feature in active times and often permits of two or more profits being made on the same block of tonnage, was largely done away with, and the opportunity to make speculative gains through the enhancement of prices was absent in 1924 owing to the generally downward trend of quotations.

New York Harbor Piers—Tonnage, 1924.

Piers	Railroad	Anthracite	Bituminous	Total
Arlington	Balt. & Ohio	.....	828,757	828,757
Communipaw	C. RR. of N. J.	179,448	118,775	298,223
Elizabethport	C. RR. of N. J.	681,812	26,416	708,228
Hoboken	D., L. & W.	2,737,873	.....	2,737,873
Perth Amboy	Lehigh Valley	1,917,810	.....	1,917,810
Pier 18 Jersey City	C. RR. of N. J.	1,497,815	663,620	2,161,435
Port Johnston	C. RR. of N. J.	.....	.....	.....
Port Liberty	C. RR. of N. J.	99	697,208	697,307
Port Reading	Port Reading	1,632,012	1,672,705	3,304,717
South Amboy	Pennsylvania	785,039	2,193,673	2,978,712
Undercliff	Erie	1,796,827	12,421	1,809,248
Weehawken	Ontario & West	972,191	.....	972,191
Cornwall	Ontario & West	272,977	.....	272,977

1923

Piers	Railroad	Anthracite	Bituminous	Total
Arlington	Balt. & Ohio	.....	741,654	741,654
Communipaw	C. RR. of N. J.	251,426	132,226	383,652
Elizabethport	C. RR. of N. J.	805,334	28,419	833,753
Hoboken	D., L. & W.	2,165,451	.....	2,165,451
Perth Amboy	Lehigh Valley	2,434,293	.....	2,434,293
Pier 18 Jersey City	C. RR. of N. J.	1,334,942	868,497	2,203,439
Port Johnston	C. RR. of N. J.	45	.....	45
Port Liberty	C. RR. of N. J.	55	727,264	727,319
Port Reading	Port Reading	2,031,074	1,958,968	3,990,042
South Amboy	Pennsylvania	825,956	2,995,705	3,821,661
Undercliff	Erie	1,931,471	43,854	1,975,325
Weehawken	Ontario & West.	1,096,699	.....	1,096,699

Only bituminous coal for steam purposes is imported into Guatemala, and importations in 1923 amounted to 702 metric tons, as against 239 tons in 1922 and 841 tons in 1921, all of which came from the United States. The coal which is received at the port of Puerto Barrios on the Atlantic or eastern coast side is purchased by the New York agencies of the consumers.

ANTHRACITE MINE PRICES IN NEW YORK MARKET, 1924.

We give below prices prevailing at New York on anthracite coal, f. o. b. mines, company and independent, during the past year, obtained from reliable sources of information.

	January		February	
Size	Comp.	Indep.	Comp.	Indep.
Broken	$8.00-$9.25	$8.00-$9.25	$8.00-$9.25	$8.00-$8.50
Egg	8.75- 9.25	8.75- 9.25	8.75- 9.25	8.25- 9.00
Stove	8.75- 9.25	9.85-10.50	8.75- 9.25	9.50-10.25
Chestnut	8.75- 9.25	9.85-10.50	... ...	... ...
Range	9.00	... .	9.00	9.00
Pea	6.15- 6.65	5.50- 6.25	6.15- 6.65	4.50- 6.25
Buckwheat	3.50	2.50- 3.25	3.50	2.25- 3.50
Rice	2.50	1.75- 2.50	2.50	2.00- 2.50
Barley	1.50	1.25- 1.50	1.50	1.50- 1.75
Birdseye	1.60	1.50	1.60	....

	March		April	
Size	Comp.	Indep.	Comp.	Indep.
Broken	$8.00-$9.25	....	$8.00-$8.65	....
Egg	8.75- 9.25	$7.75-$8.25	8.25- 8.65	$8.25-$8.65
Stove	8.75- 9.25	9.25- 9.75	8.25- 8.85	8.25- 9.00
Chestnut	8.75- 9.25	9.25- 9.75	8.25- 8.75	8.25- 9.00
Range	9.00	....	8.50	....
Pea	6.15- 6.65	4.75- 5.25	5.50- 6.00	4.50- 5.00
Buckwheat	3.50	2.25- 3.00	3.00- 3.15	2.25- 3.00
Rice	2.50	1.75- 2.25	2.00- 2.25	1.85- 2.00
Barley	1.50	1.50- 1.75	1.50	1.50- 1.75
Birdseye	1.60	1.60- 1.75	1.60	....

	May		June	
Size	Comp.	Indep.	Comp.	Indep.
Broken	$8.00-$8.75	$8.50-$9.00	$8.00-$8.85	....
Egg	8.35- 8.75	9.00- 9.25	8.45- 8.85	$8.75-$9.25
Stove	8.35- 9.00	9.00- 9.50	8.45- 9.10	9.00- 9.25
Chestnut	8.35- 8.85	8.75- 9.25	8.45- 8.95	8.75- 9.25
Range	8.60	....	8.70	....
Pea	5.50- 6.00	5.50- 6.00	5.50- 6.00	5.00- 5.50
Buckwheat	3.00- 3.15	2.35- 3.00	3.00- 3.15	2.15- 3.00
Rice	2.00- 2.25	1.90- 2.25	2.25	1.75- 2.25
Barley	1.50	1.50- 1.75	1.50	1.25- 1.50
Birdseye	1.60	....	1.60	....

Size	July Comp.	July Indep.	August Comp.	August Indep.
Broken	$8.00-$8.95	....	$8.00-$9.10	....
Egg	8.55- 8.95	$8.75-$9.00	8.65- 9.10	$8.35-$8.75
Stove	8.55- 9.20	9.00- 9.25	8.65- 9.45	9.25- 9.60
Chestnut	8.55- 9.05	8.60- 9.00	8.65- 9.15	8.25- 8.75
Range	8.80	....	8.90	....
Pea	5.50- 6.00	4.50- 5.25	5.75- 6.00	4.25- 5.25
Buckwheat	3.00- 3.15	2.00- 2.50	3.00- 3.15	2.00- 2.25
Rice	2.00- 2.25	1.50- 2.15	2.00- 2.25	1.70- 2.00
Barley	1.50	1.00- 1.50	1.50	....
Birdseye	1.60	1.10- 1.50	1.50	....

Size	September Comp.	September Indep.	October Comp.	October Indep.
Broken	$8.00-$9.25	....	$8.00-$9.25	....
Egg	8.75- 9.25	$8.50-$9.40	8.75- 9.25	$9.25-$9.75
Stove	8.75- 9.50	9.25-10.00	8.75- 9.50	10.00-10.50
Chestnut	8.75- 9.25	8.75- 9.45	8.75- 9.25	9.50-10.00
Range	....	....	....	....
Pea	5.50- 6.00	5.00- 5.25	5.50- 6.00	5.25- 5.50
Buckwheat	3.00- 3.15	2.25- 2.90	3.00- 3.15	2.25- 3.00
Rice	2.00- 2.25	1.75- 2.00	2.00- 2.25	1.85- 2.25
Barley	1.50	1.25- 1.50	1.50	1.25- 1.50
Birdseye	1.60	....	1.60	1.35- 1.60

Size	November Comp.	November Indep.	December Comp.	December Indep.
Broken	$8.00-$9.25	....	$8.00-$9.25	....
Egg	8.75- 9.25	$8.50-$8.75	8.75- 9.25	$8.25-$8.75
Stove	8.75- 9.50	10.00-10.50	9.00- 9.65	10.00-10.75
Chestnut	8.75- 9.25	9.75-10.25	8.75- 9.40	9.75-10.50
Range	....	....	....	....
Pea	5.50- 6.00	5.00- 5.50	5.50- 6.00	4.75- 5.50
Buckwheat	3.00- 3.15	2.00- 2.50	3.00- 3.15	2.00- 2.50
Rice	2.00- 2.25	1.75- 2.15	2.00- 2.25	1.75- 2.15
Barley	1.50	1.25- 1.50	1.50	1.25- 1.50
Birdseye	1.60	....	1.60	..

When an abandoned section of the Maryd anthracite colliery was pumped out during 1924, a trip of loaded mine cars that had been standing under water for 57 years was discovered. The cars were in almost perfect condition, as the chemicals in the water had evidently acted as a preservative. Maryd colliery is located in the Schuylkill region, near St. Clair.

BITUMINOUS MINE PRICES QUOTED AT NEW YORK, 1924.

We give below prices prevailing on leading brands of coal in the New York market during the past year, based upon information from correspondents and obtained from other reliable sources of information.

	Jan.	Feb.	Mar.	Apr.
Pool 1	$2.75-$3.25	$2.75-$3.25	$2.75-$3.25	$2.50-$3.25
" 9	2.00- 2.50	2.00- 2.50	2.00- 2.40	2.00- 2.40
" 10	1.75- 2.15	1.75- 2.10	1.75- 2.15	1.75- 2.00
" 11	1.60- 1.75	1.50- 1.75	1.25- 1.60	1.50- 1.75
" 54	1.60- 1.75	1.50- 1.75	1.40- 1.65	1.40- 1.65
" 64	1.60- 1.75	1.50- 1.75	1.40- 1.65	1.40- 1.65

	May	June	July	Aug.
Pool 1	$2.50-$3.00	$2.50-$2.90	$2.50-$2.90	$2.25-$2.35
" 9	2.00- 2.40	2.00- 2.40	1.90- 2.35	1.90- 2.25
" 10	1.75- 2.00	1.75- 2.00	1.65- 2.00	1.70- 2.00
" 11	1.50- 1.75	1.50- 1.75	1.40- 1.75	1.50- 1.75
" 54	1.40- 1.65	1.40- 1.65	1.35- 1.65	1.35- 1.65
" 64	1.40- 1.65	1.40- 1.65	1.35- 1.65	1.35- 1.65

	Sept.	Oct.	Nov.	Dec.
Pool 1	$2.50-$3.00	$2.50-$3.00	$2.50-$3.00	$2.50-$3.00
" 9	1.90- 2.35	2.00- 2.25	2.00- 2.25	1.90- 2.25
" 10	1.65- 2.00	1.80- 2.00	1.75- 2.00	1.70- 2.00
" 11	1.40- 1.85	1.50- 1.75	1.50- 1.75	1.50- 1.75
" 54	1.40- 1.65	1.50- 1.65	1.40- 1.60	1.40- 1.60
" 64	1.40- 1.65	1.50- 1.65	1.40- 1.60	1.40- 1.60

Coal Storage Recommendations.

The Coal Storage Committee of the American Engineering Council has this to say of certain differences between New York and Philadelphia as regards the necessity of carrying large coal stocks:

"Philadelphia differs notably from New York in two respects: New York is a receiving port for coal, whereas Philadelphia is a port of departure. New York receives large quantities of its coal (that portion coming by all-rail shipment) across a natural barrier of transportation, the Hudson River, which at times is a serious barrier.

"Philadelphia, on the other hand, is entered by several of the large coal roads, and all parts of the city are accessible to truck haulage. On account of these differences the need for storage is much less in Philadelphia than in New York."

The engineers studied conditions among ten typical Philadelphia companies whose annual coal consumption is 1,342,300 tons. Based upon these calculations, the report recommends for Philadelphia a uniform monthly shipment plan which, it was said, would result in a monthly shipment of 111,858 tons to the ten concerns, seasonal storage of 37,250 tons, seasonal storage of 2.8 per cent of annual consumption, reserve storage of 7.2 per cent of annual consumption and total storage of 10 per cent of annual consumption.

YEAR 1924 AT PHILADELPHIA

Started Quietly, Operators Finding Much Difficulty with Steam Sizes —Not Much Satisfaction in Soft Coal.

January started off rather quietly, and in addition the retail trade inherited a continuation of price-cutting that was much in evidence in the preceding month. Standard retail prices at this time were: Egg, $15.75; stove, $16.25; nut, $16.00, and pea, $12.25; yet there were variations as low as $1.00 below these figures. Of course the rather mild weather during this month had much to do with the unsettled state of prices. Most sizes were in plentiful supply, and egg and pea so much so that some of the independent operators found it necessary to shade prices to move them.

The operators also found much difficulty at this time with their steam sizes, as the market was more than well supplied with everything but barley. This latter size was greatly helped by the numerous installations during the past few years designed to use this small size, and as a result it continued to be well taken at most times. It was different with buckwheat and rice, and the independent shippers had to resort to their usual practice of selling this size below company price in order to move it. All of the company producers found it necessary to make use of their storage yards to move these two sizes. The better demand for barley, though, in recent years has had the tendency of moving rice a trifle better when there was not enough of barley to go around. At the beginning of the year company steam prices were as follows: Buckwheat $3.50, rice $2.50 and barley $1.50.

Better Promises in February.

February opened up with much better promise for all interests in the coal trade, for it proved that most of the cold weather of an ordinary winter was piled into this short month. There were no very really severe spells of cold weather, and while the snows were light, conditions served to make demand for coal all around the best of the entire year. Despite the better weather conditions there was a lack of coherence among the dealers on retail prices, and cheap coal was plentiful.

Based on sales, March was a good coal month. However, the yards for the most part held good stocks, and the demand on the producers was not particularly strong. The big producers were compelled to use their storage yards for the first time to dump pea.

March also saw a change in the steam situation, in that the companies made an early announcement of their contract intentions for the coming coal year from April 1st. Buckwheat on contract was reduced by 50 cents to $3.00, rice was changed to $2.25, a cut of 25 cents, but barley reflected the demand that it has been in of recent years by being held to the old figure of $1.50.

Cold and Wet Spring.

Beginning with April the market experienced one of the coldest and wettest spring seasons for 30 or 40 years, which made coal buying imperative right along for that period, and as a result much of the summer filling business anticipated at this time was postponed. The company prices for family coal as an-

nounced at this time were: Egg, $8.65, stove $8.75, chestnut $8.65, and pea $6.00. As a result of this reduction in mines prices, the retail prices of the dealers were adjusted accordingly, with the average running about as follows: Egg $14.25, stove $14.75, nut $14.50, and pea $10.75.

May was also a good coal month, because of the unusual amount of rain which fell at this time, making household fires very necessary. The summer storing business was started, but not very actively.

June found the mines prices of coal advanced another 10 cents a ton by the company producers, while the independents added something more, and ran in a general way about 50 cents above company coal.

July gave the dealers real evidence that the consumer was in no hurry to lay in the next season's coal and much effort was expended to get the orders that did come in. Even though mine prices were advanced each month this did not serve to stir the consumer to come forward. The strong demand for stove which began earlier in the season continued.

The quietest spot of the year was reached in August and the demand was so light that the dealers were compelled to hold back orders already placed with their shippers. For the first time since before the war, there was a curtailment of working time at the mines.

Steam Coal Weak.

In September better buying began, although there was nothing akin to a rush, and the mines were all on full time again. Stove once more regained its strength in demand, and there seemed to be a greater stability in retail prices. Steam coals, though, continued weak. As the month was cool, the retail buying was quite good. Company prices at this time reached $9.15 for egg, $9.40 for stove, $9.15 for nut, with pea remaining at $6.00. The independent prices maintained an average of about 50 cents over company coal. Retail prices for September were as follows: Egg, $15.25, stove $15.50, nut $15.25 and pea $11.00.

October was such an extremely mild month that shortage of production due to the flooding of the mines late in September was not so seriously felt as it might have otherwise been. Retail trade was extremely dull, and stove was the only size that the dealers were really trying to get.

While November started off somewhat warm, there was improvement shortly, although the demands on the retailer were not heavy. Company prices remained the same, but individual shippers increased until their prices were running 50 to 75 cents higher than company. Steam coals were quite well moved.

Much was expected of December and while some cold weather did come with the month, on the whole the buying was a sort of up and down proposition. Stove coal was found to be in good supply this month, and even nut showed signs of being more plentiful, with dealers' yards well stocked.

Bituminous Situation.

In the bituminous coal trade it is, indeed, difficult to get anyone to admit any real satisfaction with the business produced during the year. At the very beginning in January the call for coal was extremely quiet, as both iron and textiles were experiencing the worst phase of the depression that had visited them in the last few years. Even at that the slowing down in the industry was far

from being as pronounced as let-downs of years ago, when there used to be almost a total cessation of work.

Since the boom times during the war and after, manufacturers are wont to consider themselves in distress unless production is at almost the same rate as they enjoyed when they were breaking records. Right through the year the consumer was slow to add to his stock, very frequently buying merely from hand to mouth, and it has been many a year when the stocks on the ground around manufacturing plants reached such a low ebb as they did during the summer.

The producers of coal were early in the market with contract prices for the coal year beginning April 1st, for in February a number of leading producers solicited business on a contract basis at prices ranging from $3.00 to $3.25 for high-grade fuel. However, the consumer was not at all anxious to enter into an agreement, as the spot prices were so much lower than these quotations, and most of them decided to take a chance on the market.

As spring approached there seemed to be a tendency for industry to pick up a bit and more consumers than ever were willing to at least stock some coal. There was also a disposition for some producers to quote lower contract prices, some offers as low as $2.25 to $2.50 being heard. Certain producers were enabled to do this for the reason that they were producing non-union coal, and all year long there has continued to be much contention over this matter of union and non-union production.

Many Mines Closed.

During the summer quite a few operations were compelled to close on account of lack of business, but as fall approached there was a noticeable improvement. However, most of the buying continued on the spot basis, as the consumer felt satisfied at the very low prices which he was enjoying, although it must be said that as the end of the calendar year approached there was a greater tendency to enter into contract arrangements for the balance of the coal year. This was particularly noticeable with the public utility concerns, who evidently wanted to be assured of a fair proportion of their needs in case winter storms would impede deliveries.

During the summer the railroads made particularly advantageous agreements with the mines for fuel, especially on some of the gas grades. During the summer and right through to winter the railroads built up their reserve piles, and it was orders of this kind, while taken at what seemed very low prices, enabled the mines to pick up enough orders on the side to keep going.

Probably one of the most disappointing features of the trade was the failure of the coal business to pick up at tide. Of course the bunker trade here has been very poor since war times, due principally to so many cargo carriers installing oil burners, and some people had almost given up hope of recovery of this trade. Yet in December, almost at the close of the year, there appeared to be good reason for believing that the worst was more than past. This came with the news that vessel owners were finding the price of fuel oil reaching the point where it was beginning to lose its advantage of economy.

All during the year gas coals seemed to suffer the same discouraging business as the other grades. As fall approached, though, there was improvement shown here, as the owners of utilities began to reason that they had kept out of the market long enough and began to stock up for winter. There was an

especially strong demand for gas slack during fall and the early days of winter, although the demand was partly met by the consumer taking mine-run coal when unable to get as much of the slack as wanted. This became particularly noticeable in the middle of November when the lake trade ceased and orders for three-quarter coal fell off. Much of this demand for slack came from the cement mills, who are in the habit of stocking heavily for their winter operations.

The one noticeable feature of the trade was the almost unwavering scale of spot prices throughout the year, the variations being extremely light from one end of the year to the other. This is explained by the fact that at the beginning of the year prices were down to rock bottom, and any lower price meant closing down of the mines.

Now while the coal man generally is wont to say that 1924 was a most unprofitable year, yet the fact remains that there are few years that have produced and consumed more coal. Any year that enjoys months of production in succession showing an output of 50,000,000 tons must indeed be an enormous industry. There is no question that the year has been one of adjustment and the lessons learned under such conditions must be worth at least as much as a fair proportion of the profits hoped for. The enormous tonnage of coal consumed is the strongest kind of evidence that there is going to be an ever growing demand for coal.

BITUMINOUS MINE PRICES QUOTED AT PHILADELPHIA, 1924

We give below prices prevailing on leading brands of coal in the Philadelphia market during the past year, based upon information from correspondents and obtained from other reliable sources.

	Jan.	Feb.	Mar.	Apr.
Pool 1	$2.75-$3.25	$2.75-$3.25	$2.75-$3.25	$2.75-$3.25
9	2.10- 2.50	2.10- 2.50	2.10- 2.50	2.00- 2.45
10	1.70- 2.00	1.70- 2.00	1.70- 2.00	1.70- 2.00
11	1.55- 1.75	1.55- 1.75	1.55- 1.75	1.30- 1.70
54	1.60- 1.80	1.60- 1.80	1.50- 1.75	1.45- 1.70
64	1.60- 1.80	1.60- 1.80	1.50- 1.75	1.45- 1.70

	May	June	July	Aug.
Pool 1	2.75- 3.25	2.75- 3.25	2.60- 3.00	2.60- 3.00
9	2.00- 2.45	2.00- 2.45	1.95- 2.35	1.95- 2.35
10	1.70- 2.00	1.70- 2.00	1.65- 1.90	1.65- 1.90
11	1.30- 1.70	1.30- 1.70	1.35- 1.60	1.35- 1.60
54	1.45- 1.70	1.45- 1.70	1.40- 1.60	1.40- 1.60
64	1.45- 1.70	1.45- 1.70	1.40- 1.60	1.40- 1.60

	Sept,	Oct.	Nov.	Dec.
Pool 1	2.35- 2.50	2.50- 2.90	2.50- 2.90	2.50- 2.90
9	1.95- 2.35	1.95- 2.35	1.95- 2.35	1.95- 2.35
10	1.65- 1.90	1.65- 1.90	1.65- 1.90	1.65- 1.90
11	1.35- 1.60	1.35- 1.60	1.35- 1.60	1.35- 1.60
54	1.40- 1.60	1.40- 1.60	1.40- 1.60	1.40- 1.60
64	1.40- 1.60	1.40- 1.60	1.40- 1.60	1.40- 1.60

THE YEAR 1924 AT BOSTON

Declining Prices and Slow Demand Made It Generally Unsatisfactory —No Spectacular Drop in Quotations.

The year 1924 is pretty generally labeled by the coal trade in New England as an unsatisfactory one. So was 1923, when prices declined steadily from January to December. The 1924 12-month period was similar to 1923 in that the January prices were the highest of the year, though in 1924 there was no spectacular price drop such as featured 1923, when quotations fell from $11.50 gross ton on cars Boston, to $5.75 by the close of the year.

It is not asserted that Boston coal operators and shippers did not make any money in 1924, though a verbatim reproduction of their comments during most of the period would seem to indicate that losing money in the coal trade was almost a natural thing. In more than one month bituminous prices were asserted to be at, or so near cost that red ink figures were almost a foregone conclusion. And it is a fact that at times the market at Providence and Boston was so unsatisfactory that more than one firm refused to ship coal to New England until some improvement set in.

Of course some firms made profits, and it is understood, good profits, due to advantages they had over the majority of shippers in the matter of owning low-cost mines, having their own coal fleet and possessing their own docks. Other shippers made nominal gains and certain ones had to be satisfied with just about breaking even month after month.

The spot bituminous price generally prevailing at the opening of the year was around the $6 mark, gross ton on cars Boston. While this rose later to $6.50, that was the only substantial upward move during 1924, prices after the middle of March holding throughout the whole 12 months under $6. Shippers declared that it was a buyers' market most of the year, and even the buyers admitted that prices were very favorable and at times bought freely.

Holidays Interfere With Sales.

In the last week in December, 1923, spot bituminous prices for New River and Pocahontas Pool 1 coal was generally $5.75 gross ton on cars. The holidays naturally interfered with the volume of sales, but a strengthening took place in quotations that was very gratifying to the trade in view of the long and practically uninterrupted decline. Prices rose to $6 gross ton on cars and small lots sold for $6.10. The improvement was not due to much increase in demand, but rather to the closing down of many mines in the New River and Pocahontas districts that were unable to operate at a profit.

By the end of January prices firmed some more and it appeared as if buyers had decided that prices were upward bound. Some substantial tonnages were moved at $6.10 and some shippers were demanding $6.25. Prices jumped at Norfolk to $5, f. o. b., Hampton Roads.

About the first of February Boston prices ruled at $6.35 on cars and some shippers were obtaining $6.50, which figure was the high for the year. The jump to that quotation for best quality West Virginia smokeless coal, a full dollar a ton, was as much a surprise to many coal men as it was to the consumers, ever

though the former had predicted higher prices. At $6.45 or $6.50 shippers were able to see something like a profit.

However, that price was not destined to hold long. By the middle of February it had dropped to a range of $6.15 to $6.25 and sales showed no disposition to pick up. Consumers appeared to be well stocked up and were not anxious as to the outlook. Providence prices generally were about 10 cents a ton higher.

Weakness in March.

Beginning with March some real weaknesses appeared in the spot market and from $6.15, on cars Boston, prices declined each week until at the end of the month the prevailing level had slipped to $5.70, with sales of Pool 1 coal reported at $5.60 and other interests getting $5.75. The chief depressing factor was the very large amount of coal standing at the Southern piers.

April saw no relief in the price situation in southern bituminous coals, the sagging tendency continuing the first two or three weeks and from $5.60 near the end of March, quotations slipped 5 and 10 cents at a time until they touched $5.35 and some distress coal was actually disposed of at $5.25 gross ton on cars. An over-supply of coal at the harbor was a factor in depressing quotations.

Prices firmed up in May, starting at $5.40 and running up to $5.50 and $5.60 in the first week. In the second week of May the general asking price was $5.75, a figure which was pretty generally maintained to the close of the month.

During June quotations fluctuated between $5.75 and $5.60 with continuing dullness reported in the local market. Further curtailment in the textile industry and slowing down in the rubber factories of New England gave the coal trade little encouragement for the immediate future.

During July the general complaint was that there was no business. It was a holiday month and vacations in the ranks of both buyers and shippers caused both an appearance and an actuality of dullness. Prices eased off, if anything, and the prevailing level through the month was between $5.50 and $5.60, with some business done at $5.65 and over.

Improvement in Sentiment.

Towards the latter part of the month reports of increased operations in industrial circles caused an improvement in sentiment in the coal trade. The volume of sales did not perceptibly improve, however, though inquiries were more numerous. The low prices at Hampton Roads, where good coal was obtainable at $4.20 to $4.30 gross ton f. o. b., gave no hope of strengthening the local quotations.

By the first week in August the price level had slipped to the "$5.40 on cars" mark and the keen competition for such business as was obtainable afforded little hope for a rebound toward higher prices. The decline was started by too much tonnage at Mystic Wharf and price cutting was resorted to in order to clean up cargoes. For a few days the tone of the market strengthened and then eased again. By the end of the month buyers were not even interested in good smokeless mine-run coal at $5.35, claiming that they could get all they wanted at $5.25.

This unsatisfactory situation obtained all through September, in which month prices actually fell as low as $5.20 gross ton on cars for good southern coal. This price was of course not the average, nor made by every shipper. Some held

to a minimum of $5.35 while others were willing to sell at $5.25. The point is that the spot market was a most variable quantity, buyers having the better of the argument.

Improvement for the first time since February started in October. The price began to rise steadily, starting at $5.35 and attaining $5.60 and $5.65 in the third week. Volume of orders increased also, affording some satisfaction to shippers who had been forced to look back for some time upon narrow margins and slim turnover. The first week in November saw a slight easing back to the level between $5.50 and $5.60, the former price prevailing on good sized orders for high grade run of mine Pocahontas or New River coal. The general quickening which was evident in trade and industry immediately following the election of Coolidge was not reflected in any sudden spurt in the coal trade.

Anthracite Unsatisfactory.

The year in anthracite was not an especially satisfactory one, according to independent shippers. Anthracite sells pretty much according to the weather and the 1923-24 winter was a very mild one. December, 1923, was an open month, and the January following was no better. Besides high temperatures, the trade had to contend with increasing use of fuel oil, kerosene, gas, prepared bituminous and coke, all of which substitutes were urged upon the public by the State fuel administrator.

The demand for anthracite in January by dealers was very draggy, and prices declined practically during the whole month. Egg with other sizes in the first week of the year was $9.00 to $9.50. It declined to as low as $8.00 for straight shipments during the month. Stove and nut at $10.00 and $10.25, respectively, as a minimum, dropped to $9.75. Egg and pea were hard to sell, though independent prices of both were below the company circular. A 50-cent cut in retail prices in the middle of the month indicated the kind of market.

February showed no improvement, the weather continuing mild. Retailers' stocks were large, especially on pea and egg, and householders showed little disposition to fill up bins. Egg was a drug on the market, being offered as low as $8.25 gross ton mines, while pea was offered at $4.75. Stove and nut could be had at $9.25.

High temperatures continued into March and the spot demand for domestic sizes was lifeless. Householders appeared stocked until the end of the cold weather season and most dealers had no room for additional coal. Egg eased to $7.75 and pea to $4.50 gross ton mines. Independent mines were said to have lost as much money in the first three months of the calendar year as they made in the previous six.

A general reduction of about 50 cents a ton was made by practically all the anthracite interests on April 1st, followed by a cut on the part of retail dealers in many Massachusetts cities. Boston dealers did not make any reduction until the end of the month and then it did not apply to egg, stove or nut, which remained unchanged to the consumer at $15.50 delivered, while a 50-cent cut was made in pea and broken coal to $12.00 and $15.00, respectively. On the whole, buying in April was very poor.

Firmed Up in May.

One of the incidents in which the trade appeared interested was the action of the State Senate on April 30th giving a lease of life for another year to the Special Commission on the Necessaries of Life.

Anthracite firmed up in May, straight stove commanding $9.50, and stove and nut $9.25 and egg $9.00, when all three sizes were taken. June showed a steady trade, with stove especially active. However, the textile unemployment with thousands out of work, hit many retail dealers hard. One of the largest dealers in a New England city was unable to take any of its June allotment because its yards and sheds were full.

July and August were slow ones for anthracite wholesalers. Egg and nut were freely offered at $8.75, and in July and in August dropped to $8.25. Retailers increased the price of the three popular sizes 25 cents a ton around the first of September, a hardening in prices took place and by the end of the month prices were up $1.00 to $1.50 above the August lows. Nut sold at $9.50, stove at $10.00 and straight stove at $10.25 to $10.50. Egg held around $9.00.

Further strengthening took place in October, so that by the end of the month stove was selling for $11.00 to $11.50, and nut for $10.00 to $10.25. Egg was weak, however. Buying fell off considerably in November, though straight stove was in heavy demand and the price rising to as high as $11.65 a ton. Egg and pea were not wanted, the former dropping to $8.50. Buckwheat was very weak.

The first two weeks in December were extremely mild and a weather market obtained. The warm weather actually forced many dealers to decline to accept shipments which they were supposed to take on an allotment basis. Prices were easier, nut and stove being quoted at $10.00 to $10.50, straight egg $8.25 to $8.75 and pea $4.75 to $5.50, these levels prevailing well up toward the Christmas holidays.

Central Pennsylvania Coal Production.

Bituminous coal production in Central Pennsylvania in 1922, '23, and '24 and the United States in 1923 and 1924 was:

Month	Cent. Pa., 1922	Cent. Pa., 1923	United States, 1923	% of Cent. Pa., 1923	Cent. Pa., 1924	United States, 1924	% of Pa., 1924
Jan.	3,373,734	4,776,441	51,943,000	09.20	3,914,082	49,806,154	07.86
Feb. ...	3,864,409	3,981,736	43,610,000	09.13	3,796,921	45,568,915	08.33
Mar. ...	4,889,328	4,584,688	48,411,000	09.47	3,584,301	40,352,021	08.88
Apr. ...	661,282	4,019,754	44,028,000	09.13	2,434,241	29,266,828	08.32
May ...	700,521	4,251,411	47,660,000	08.92	2,889,663	31,350,987	09.22
June ...	862,303	4,461,645	47,054,000	09.48	2,874,607	30,157,019	09.53
July ...	781,329	4,252,354	46,678,000	09.11	2,796,124	31,930,935	08.76
Aug. ...	1,886,354	4,618,432	50,544,000	09.14	2,940,506	35,121,533	08.37
Sept. ..	4,243,696	3,885,499	47,805,000	08.13	3,297,135	40,762,252	08.09
Oct. ...	4,782,879	3,669,882	50,869,000	07.21	3,908,933	46,215,826	08.46
Nov. ...	4,358,137	3,187,032	44,387,000	07.18	3,359,494	41,215,517	08.15
Dec. ...	4,383,613	3,484,789	41,208,000	08.46	3,943,315	49,952,013	08.58
Total ..	34,767,584	49,173,663	564,157,000	08.72	39,739,322	467,700,000	08.50

In New York City there are seven electric generating stations with a combined capacity of 1,190,000 horsepower. In contrast with this is the situation in London, where 85 central stations have a total capacity of only 900,000 horsepower.

BOSTON COAL RECEIPTS

Receipts of coal at Boston, Mass., by water and rail, during 1924 and five years previous, were as follows:

Water	1919	1920	1921	1922	1923	1924
Anthracite	1,018,563	1,376,954	1,174,206	632,112	1,319,119	1,045,260
Bituminous	2,616,276	3,047,643	3,213,240	4,065,540	4,640,299	4,601,000
Nova Scotia	.....	.....	.....	*1,463,584	*325,387	*24,487
Rail						
Anthracite	257,841	234,261	236,292	182,538	370,409	333,786
Bituminous	115,637	119,449	73,256	83,956	109,716	125,409
Total	4,008,317	4,778,297	4,696,994	6,427,730	7,064,930	6,129,942

*Nova Scotia and Great Britain.

Routes by which coal arrived, monthly, during 1924 were:

Month	Water			Rail	
	Anthracite	Bituminous	Foreign	Anthracite	Bituminous
January	119,470	400,014	....	27,702	11,095
February	67,052	392,315	9,892	31,237	12,722
March	70,914	429,685	....	31,423	12,196
April	67,735	281,722	....	26,814	9,235
May	79,099	262,235	....	29,487	5,396
June	74,131	330,213	....	26,674	6,053
July	96,545	365,044	....	28,854	3,676
August	122,439	401,025	....	29,017	4,030
September	102,414	397,070	4,002	22,219	6,337
October	96,931	445,797	2,411	28,451	15,155
November	83,409	428,283	4,156	25,657	18,784
December	65,121	467,597	4,026	24,251	20,730
Total	1,045,260	4,601,000	24,487	333,786	125,409

Below is a table of receipts of both bituminous and anthracite coal, in gross tons, at Boston, by months during 1922, 1923 and 1924, and by it will be seen at a glance the fluctuations in receipts:

Month	Bituminous			Anthracite		
	1922	1923	1924	1922	1923	1924
January	364,677	433,338	411,109	42,167	130,206	147,172
February	453,439	441,068	405,037	94,778	133,466	98,289
March	525,288	538,769	441,881	141,317	180,387	102,237
April	394,123	482,059	290,957	71,064	147,758	94,549
May	326,063	449,197	267,631	13,175	167,818	108,586
June	310,987	360,007	336,266	25,895	142,354	100,805
July	313,412	349,033	368,720	16,751	149,456	125,399
August	250,235	426,876	405,055	22,857	138,786	122,017
September	246,765	416,496	403,407	25,109	76,223	124,633
October	326,691	358,444	460,952	109,778	141,242	125,382
November	293,503	366,311	447,067	118,889	136,585	109,066
December	332,404	430,587	448,327	132,870	145,247	89,372
Total	4,137,587	5,050,015	4,726,409	814,650	1,689,528	1,351,507

Boston Receipts: All Gross Tons.

The data given below represents authoritative figures on this subject and will no doubt be found useful for reference:

Year	Anthracite	Bituminous	Year	Anthracite	Bituminous
1924*	1,351,507	4,726,407	1906	1,659,679	2,859,844
1923*	1,689,528	5,050,015	1905	1,977,398	2,798,290
1922*	814,650	4,149,496	1904	2,002,779	2,515,490
1921	1,410,498	3,291,505	1903	2,151,545	2,263,729
1920	1,606,715	3,167,092	1902	1,015,404	2,224,508
1919	1,276,404	2,731,913	1901	2,126,411	2,113,302
1918	1,484,539	5,699,096	1900	1,938,733	2,050,500
1917	1,606,078	4,273,268	1899	2,166,452	1,698,105
1916	1,480,896	4,910,687	1898	2,185,806	1,709,166
1915	1,702,402	4,689,321	1897	2,023,318	1,534,886
1914	1,911,525	4,919,218	1896	2,156,179	1,329,083
1913	1,854,450	4,991,884	1895	2,516,343	940,967
1912	1,719,132	4,539,759	1894	2,237,599	921,883
1911	1,982,940	4,171,230	1893	2,221,878	1,193,896
1910	1,826,124	4,107,294	1892	2,065,536	870,271
1909	1,706,659	3,495,011	1891	2,039,443	1,070,088
1908	1,776,401	3,302,929	1890	1,740,564	964,857
1907	2,053,328	3,184,964	1889	1,647,368	914,966

*In addition to domestic tonnage received there was certain foreign tonnage, as shown by initial tabulation.

The variation in the amounts year by year is based upon several circumstances, a full explanation of which would require considerable detail. Not the least of the features is the growth of all-rail movement, this modern development materially affecting the relative importance of Boston as a coal receiving port for the New England trade.

Where Coal Consumption Is Light.

In the South, the climate is against a large degree of coal trade growth and activity, for high temperatures have an effect on coal consumption in factories and on the railroads as well as in households. Can one not imagine that the sun's rays would be almost enough to keep up steam in a locomotive going across the lowlands of Georgia under a blazing mid-summer sun!

Such circumstances affect the southeast portion of our country, and in the southwest oil has established a vast territory where coal is on a non-competitive basis.

There are the natural gas areas also. The vaporous fuel is not so notable or aggressive a factor as it was 15 or 20 years ago, but it is still important in many sections.

On the Pacific Coast, mild temperatures and the lack of heavy manufacturing restrict the coal consumption, even up in the far corner of the Pacific Northwest, where saw-mills rank among the great industries and burn up their own refuse, not only as a means of economy but for safety and convenience.

RECEIPTS OF COAL IN NEW ENGLAND

Volume of Business in Both Anthracite and Bituminous in 1924 Far Below Average of Prior Four Years.

The following tables summarize the receipts of anthracite and bituminous coal in New England, including steam sizes, for each month, from 1919 to 1924, as compiled by the Massachusetts Special Commission on the Necessaries of Life from the records of the carriers. The figures are in net tons:

Anthracite—Tide and Rail.

	1919	1920	1921	1922	1923	1924
January	916,120	865,749	959,000	475,000	1,008,000	935,000
February	788,004	571,532	1,114,000	757,000	956,000	849,000
March	347,640	845,384	1,203,000	1,094,000	1,197,000	829,000
April	782,456	796,689	905,000	478,000	1,017,000	787,000
May	983,794	947,670	1,041,000	177,000	1,121,000	867,000
June	826,674	1,175,274	1,072,000	145,000	1,152,000	882,000
July	1,013,365	869,933	961,000	133,000	1,119,000	1,016,000
August	883,504	1,078,386	788,000	94,000	1,050,000	914,000
September ...	1,028,947	986,954	688,000	215,000	411,000	824,000
October	1,047,795	1,128,725	919,000	908,000	1,084,000	954,000
November ...	912,125	908,113	870,000	1,013,000	974,000	851,000
December ...	1,047,764	1,080,936	854,000	982,000	1,095,000	902,000
Total	10,578,188	11,255,345	11,374,000	6,471,000	12,184,000	10,610,000

Bituminous—Tide and Rail.

	1919	1920	1921	1922	1923	1924
January	1,392,064	1,477,194	1,688,000	1,337,000	1,852,000	1,667,000
February	1,210,497	1,336,346	1,265,000	1,834,000	2,040,000	1,712,000
March	1,069,891	1,165,472	1,335,000	2,286,000	2,306,000	1,724,000
April	1,446,680	1,393,962	1,190,000	1,258,000	2,137,000	1,199,000
May	1,566,522	1,792,764	1,238,000	948,000	2,108,000	1,146,000
June	1,555,650	1,662,611	1,558,000	929,000	2,098,000	1,213,000
July	1,744,254	2,425,023	1,246,000	943,000	2,024,000	1,332,000
August	1,827,140	2,403,587	1,500,000	1,253,000	2,146,000	2,075,000
September ...	2,036,529	2,340,889	1,468,000	2,300,000	2,035,000	1,521,000
October	1,945,333	2,016,661	1,647,000	2,212,000	1,752,000	1,741,000
November ...	1,087,238	1,781,275	1,581,000	1,801,000	1,465,000	1,718,000
December ...	1,300,185	2,038,000	1,472,000	1,707,000	1,722,000	*1,847,000
Total	18,181,883	22,433,784	17,188,000	18,807,000	23,685,000	18,895,000

* Estimate.

While 1924 was a year of reaction from the large figures of 1923, the receipts of bituminous were only a trifle below the average of 1919-22, while the receipts of anthracite were well above five previous years.

Coal production in the Norwegian mines at Spitzbergen yielded in 1924 about 250,000 tons, or about 15 per cent of Norway's total coal requirements.

BOSTON PRICES, F. O. B. MINES, 1924

We give below prices prevailing on leading brands of coal in the Boston market during the past year, based upon information from correspondents and obtained from other reliable sources of information.

	Jan.	Feb.	Mar.	Apr.
Smokeless M. R.	$4.75-$4.90	$4.65-$4.85	$4.60-$4.75	$4.15-$4.25
Clearfield M. R.	1.50- 2.25	1.65- 2.25	1.65- 2.60	1.65- 2.50
Cambria M. R.	2.15- 2.85	2.25- 2.75	2.25- 3.00	2.25- 2.85
Somerset M. R.	1.75- 2.50	2.00- 2.50	2.00- 2.75	2.00- 2.70

	May	June	July	Aug.
Smokeless M. R.	4.35- 4.60	4.25- 4.40	4.25- 4.40	4.10- 4.20
Clearfield M. R.	1.65- 2.40	1.65- 2.35	1.60- 2.00	1.60- 2.35
Cambria M. R.	2.25- 2.75	2.15- 2.75	2.00- 2.40	1.65- 2.90
Somerset M. R.	2.00- 2.50	1.85- 2.50	1.75- 2.15	1.75- 2.50

	Sept.	Oct.	Nov.	Dec.
Smokeless M. R.	4.10- 4.20	4.25- 4.35	4.25- 4.50	4.35- 4.50
Clearfield M. R.	1.60- 2.35	1.60- 2.35	1.65-*2.25	‡1.65- 2.25
Cambria M. R.	1.60- 2.60	1.60- 2.60	†1.60- 2.65	1.60- 2.75
Somerset M. R.	1.75- 2.35	1.75- 2.40	1.75- 2.35	1.75- 2.35

*Top $2.50. ‡Steam to operators. †Lot of non-union coal in Cambria County sold at $1.60.

MINE PRICES QUOTED IN THE BALTIMORE MARKET, 1924

	January	February	March	April
Pool 1	.....	.....	.....	.....
" 9	$1.75–$2.00	$1.70–$2.00	$2.15–$2.60	$1.75–$1.85
" 10	1.75– 1.90	1.65– 1.75	1.85– 2.00	1.60– 1.75
" 11	1.65	1.50– 1.60	1.70– 1.80	1.50
" 54	1.50	1.45– 1.55	1.70– 2.00	1.50– 1.70
" 64	1.50	1.45– 1.55	1.70– 2.00	1.50– 1.70

	May	June	July	August
Pool 1	.....	.....	.....	.....
" 9	$1.75–$1.95	$1.80–$1.90	$1.80–$1.90	$1.90–$2.00
" 10	1.60– 1.75	1.60– 1.70	1.60– 1.70	1.65– 1.75
" 11	1.50– 1.65	1.50– 1.60	1.50– 1.60	1.50– 1.60
" 54	1.40– 1.55	1.40– 1.65	1.40– 1.50	1.40– 1.50
" 64	1.40– 1.55	1.40– 1.65	1.40– 1.50	1.40– 1.50

	September	October	November	December
Pool 1	$2.35–$2.85	$2.35–$2.85	$2.10–$2.50	$2.10–$2.50
" 9	1.80– 1.90	1.80– 1.90	1.65– 1.80	1.65– 1.80
" 10	1.55– 1.70	1.60– 1.70	1.50– 1.65	1.50– 1.65
" 11	1.40– 1.50	1.50– 1.60	1.40– 1.50	1.40– 1.50
" 54	1.35– 1.40	1.35– 1.50	1.40– 1.50	1.40– 1.50
" 64	1.35– 1.40	1.35– 1.50	1.40– 1.50	1.40– 1.50

PITTSBURGH DURING 1924

Dullness Acute at Times and Trade Was Generally Unprofitable—Competition Sharp and Prices Hammered Down.

The year 1924 in the Pittsburgh district coal market was one in which the trade was generally unprofitable to the producer and dealer, when dullness at times became acute and one in which the Pittsburgh district saw its best market, the lake trade, definitely lost to it.

There were few milestones of moment along the way during the year to which it is now possible to retrace steps and point out constructive features to the trade. Competition had been sharp, both within the ranks of the coal men and from other fuel products. Prices were hammered down to a point where it appeared they could not conceivably go lower and even at this low level, an element of over-production in oil, which has been the cause of the ills in the coal trade, brought down the price of crude to such a point that oil was a sharp factor in competition all during the year.

A condition in the trade to which little attention has been given, but which stands out more clearly is the inaptitude of some of the men in the coal trade to adjust themselves to new conditions, take recognition of the fact that coal as a fuel can never be displaced and put their product on a higher quality plane.

Truly, of all branches of industry in this country, it is apparent that coal has served as the best football to be had during the year and the relentless pressure exerted against the value of the product was met with supine resistance only on the part of those who produced and sold the product.

The stamina appeared to go out of the trade completely when the union operators of the country signed a three-year wage agreement with the United Mine Workers during the early part of the year. The result that was to be expected occurred, the non-union fields producing the greater part of the tonnage, but there was little evidence of a reconstruction policy in this part of the union field.

Production Below Normal.

The production during the year in this district as a whole could not be classified as normal, declining during the mid-summer month of July as low as 13 per cent of full-time capacity, yet leaping back to a point of 56 per cent of capacity during the month of October when a heavy demand for domestic purposes set in. The year closed with production at about a 40 per cent rate, which might be classified as normal.

One event that is being closely studied by thoughtful coal men here is the domestic coal proposition. During the fall there was probably a better demand for district coal for domestic purposes than at any time during the past several years and as could be expected to be the case, the trade was unprepared for it. When the demand came suddenly in September, the retail yards were not well supplied and mines were swamped with orders which at times was double their actual production capacity for a month. When this situation was alleviated, the trade slid back somewhat.

As the natural gas supply wanes, as all interests here claim it is, the demand for domestic coal should increase. What a factor this is in production is shown in the demand that arose in the fall. One estimate made more than a year ago

was that the Pittsburgh domestic demand did not take more than five per cent of all the coal produced in this territory, but including large buildings and hospitals a closer percentage this year would be 10 to 12½ per cent.

Purchasing Agent the "Boss."

In industrial buying the purchasing agent was the "boss" all year. He paid what he wanted to pay for his coal, literally, and he bought all he desired, usually in small quantities. With the approach of the spring months the industrial user began to consume from stock piles and it was only when these piles were pretty darn low did they purchase again.

Some mention, of course, must be made about the prospect of a strike during the early part of the year, but the situation was so unfavorable from the coal producer's standpoint that it was recognized a few months before and the amount of buying in anticipation of a walkout was insignificant. The agreement that finally did come out of Jacksonville, Fla., in February, which provided for the continuation of the union scale for three years, was a surprise and was read with dismay by all producing in the union fields.

A demand for coke from the blast furnaces as the steel industry gathered momentum in the latter part of the year caused such a rush to put on ovens in the Fayette county field that the independent coke producers were compelled to advance wages to the level paid by the Frick Co. all during the period of summer depression.

It is not exactly a coincidence that the same market conditions should have existed on the first of January, 1924, as exists at the end. Then, as at the close, there was stiff demand for slack and difficulty in disposing of lump coal. However, during January sellers were talking stocking to industrial buyers, but strike talk had not begun to affect the market to any extent. Steam slack sold during January at from $1.50 to $1.60 and gas slack at the same price and as much as $.20 higher. Toward the end of January steam mine-run was weakening from a $1.90 to $2 price and gas mine-run stiffened up from $2.15 to $2.25. Gas lump moved up to $2.50. The spot furnace coke market was $4.

In February, Secretary of Commerce Hoover asked the Pittsburgh Coal Producers Association to take part in the operators'-miners' conference at Jacksonville, February 11th, and during the early part of the month there was a number of consumers not entirely certain as to the outcome of the situation and they began to build up their stock piles. But activity did not help the market much and when the three-year agreement was signed prices slumped off again. During the month some steam slack began to appear at $1.40 and gas slack sold at the $1.50 to $1.60 level. Gas mine-run slumped off from $2.25 to $2.35 at the beginning of the month to $2.15 to $2.25 at its close. Steam mine-run was selling at $1.75 to $2. The coke market held practically unchanged but a high rate of steel operations indicated the market was stiffening.

In March the effect of the wage agreement was felt. Consumers started to reduce stocks they had laid in two months previously. The effect on prices was noticeable instantly. In the early part of the month steam slack dropped to $1.20 and gas slack to $1.30. Gas mine-run declined to $2 to $2.25 and steam mine-run sold at $1.75 to $1.90. By end of the month steam slack was down to $1 and gas slack was $1.20 to $1.30.

During the month cuts in wages at various plants began to be made and there

were sporadic strikes, but these were shortly ironed out and many of the men went back to work at from 20 to 33⅓ per cent less than the union scale.

The decline in slack was halted in the early part of April, but the trade was beginning to suffer from the fewer number of contracts that were placed. Production declined to 30 per cent so that less slack was being produced. The steam grade rose to $1.35 to $1.45 and gas slack was being quoted at $1.60 to $1.70. Lump prices were not much changed. The steel industry began to slow down and there was apparent slightly less demand for coke. Prices started to soften and wage reduction was beginning to be talked of in the Fayette field.

During the first week in May the Keystone C. & C. Co. cut wages 20 per cent and the movement gradually spread until it engulfed the entire Westmoreland and Fayette county field. The Pittsburgh trade then began to awaken to the fact that it was not getting any of the lake business and from the outlook was not likely to share in it to any great extent.

Shipments of three quarter coal to the lakes from other points began to affect the Pittsburgh slack market and prices started to decline. The market at the end of the month on steam slack was $1.25 to $1.30. Production in this district also dropped to 20 per cent. Coke prices continued to decline and the Fayette field reported ovens going out by the hundreds. Spot furnace coke was selling at $3.25 to $3.35.

Pep Taken Out of Market.

In June lower industrial operations began to take the "pep" out of the coal market completely. Slack dropped further, going down as low as $1.05 for steam and gas $1.15 to $1.25. Both gas and steam lump were selling at former prices, with demand light for each.

In the first week of July the W. J. Rainey Co. reduced wages 33⅓ per cent to the 1917 scale. Market observers from that time on expected the Frick Co. to follow suit, but the latter concern never did. During this month production declined to the lowest level of the year, about 13 per cent. Prices scarcely changed during the month.

During August it became believed that stock piles had been reduced to a considerable extent and that buying might be expected. A slightly better demand appeared and production went up to 35 per cent. Slack became slightly stronger and slightly higher. The spot foundry coke market was $3.

In September the steel plant operations began to improve. Domestic coal began to move but slack prices did not change. Coke showed signs of stiffening. Production went up further in October to the highest rate of the year. Steam slack was selling at $1 and gas was also lower.

In the first part of November production was shown to be too high again and there was too much to be sold. Output therefore declined and slack started to move upward again as the lake season neared a close. The Pittsburgh trade had gotten scarcely any lake business during the summer. Steam slack went up to $1.25, but ovens began to go in through the Connellsville district as the steel interests demanded more coke.

During December the coke ovens started to go in so fast that the independent companies were forced to meet the Frick scale. The spot furnace market had gone up to $3.75 and after the wage advance jumped to $4.40 to $4.50. Slack was holding firm.

RECEIPTS OF COAL AT MILWAUKEE, 1924.

Receipts of anthracite and bituminous coal at Milwaukee, Wis., by months, during the calendar year 1924 were:

	By Vessel		By Car Ferry		By Rail		Grand
	Hard	Soft	Hard	Soft	Hard	Soft	Totals
January	.....	.....	10,017	37,616	200	53,550	101,383
February	.....	.....	25,759	40,475	.....	59,204	125,438
March	.....	.....	18,865	45,497	.....	54,701	119,063
April	50,576	61,499	17,592	17,496	.....	38,275	185,438
May	81,332	239,550	15,696	27,512	.....	34,233	398,323
June	149,230	285,563	26,018	28,889	.....	27,215	516,915
July	108,400	374,096	29,254	32,920	.....	27,543	572,213
August	107,685	353,502	18,354	32,372	12,500	55,888	580,301
September	75,431	326,100	17,548	38,210	5,300	36,521	499,110
October	120,640	423,064	29,507	43,400	3,000	33,709	653,320
November	83,668	437,981	20,391	58,268	.....	37,644	637,952
December	45,000	95,068	19,965	62,564	648	28,330	248,575
Totals	821,962	2,596,423	245,966	465,219	21,648	486,813	4,638,031
Totals 1923	966,224	3,238,722	249,738	575,655	7,671	823,175	5,861,185
1924 Decrease.	.....	.....	.....	.....	.....	.....	1,223,154

Receipts of coal at Milwaukee, Wis., during calendar year 1924 and five years previous were.

Coal	1919	1920	1921	1922	1923	1924
Anthracite	985,692	873,003	1,022,645	360,070	966,224	821,962
Bituminous	3,174,078	2,375,178	2,574,074	2,331,407	3,238,722	2,596,423
Total Lake	4,159,770	3,248,181	3,596,719	2,693,477	4,204,946	3,418,385
By all-rail	532,936	1,154,964	1,820,178	429,684	830,846	508,461
By car ferries	309,350	393,332	395,238	381,284	825,393	711,185
Total	5,002,056	4,696,477	5,812,135	3,502,445	5,861,185	4,638,031

MINE PRICES QUOTED IN CLEVELAND MARKET, 1924

We give below prices prevailing on leading brands of coal in the Cleveland market during the past year obtained from reliable sources of information.

		Jan.	Feb.	Mar.	Apr.
Pittsburgh	No. 8 lump	$2.00-$2.95	$2.00-$2.85	$1.90-$2.75	$2.00-$2.75
"	M. R.	1.85- 1.90	1.80- 1.85	1.75- 1.90	1.75- 1.85
"	Screen	1.60- 1.70	1.40- 1.50	1.25- 1.35	1.30- 1.35
		May	June	July	Aug.
Pittsburgh	No. 8 lump	2.10- 2.75	2.00- 2.85	2.00- 2.75	2.00- 2.85
"	M. R.	1.85- 1.90	1.85- 1.90	1.85- 1.90	1.85- 1.90
"	Screen	1.40- 1.50	1.10- 1.25	1.05- 1.15	1.20- 1.40
		Sept.	Oct.	Nov.	Dec.
Pittsburgh	No. 8 lump	2.00- 2.60	1.95- 2.80	1.95- 2.85	2.00- 2.85
"	M. R.	1.80- 1.90	1.85- 1.90	1.80- 1.90	1.85- 1.90
"	Screen	1.10- 1.25	1.00- 1.15	1.05- 1.15	1.25- 1.50

THE YEAR'S RESULTS AT BUFFALO

Jobbers Worked Hard to Keep Heads Above Water, but Made Out as Well as Those in Other Cities.

The most truthful review of the coal trade for the year, especially as regards the bituminous branch, would be a sort of dirge played on a single string. This is anything but pleasant reading or writing, so an effort will be made to get some sort of variety into it, by way of personal mention, though it will have to be confessed that a good many coal men have got in a way of talking on a par with the amount of their sales, which are often not inspiring. Bituminous prices were about at a standstill, for they had reached bottom.

It seems to be the general view of the situation now that the year 1924 has taught a lesson that will have to be worked out in this way, by running at much reduced expenses till the trade is on its feet again. It has been found that the office that keeps its head furthest above water is the one where the proprietor works hard every day and employs a single stenographer who knows how to take care of business when he is out or is obliged to be away for a day or more. As a rule, the stenographer needs to be of the male sex to do this, though there are some women who set to it and learn the business so that they can manage it in an emergency.

A member of the office force of a city mine owner voiced the situation in this way: Hearing someone asking who was to pay for a certain purchase he spoke up in rejoinder: "We don't pay for anything—we are in the coal business." This same concern had not turned a wheel in its mines since early spring, and yet kept its full office force on waiting for business to come back. Needless to say that the trade, that is, the consumer, will have to pay this cost some day. Then it will be the order of things again to call the coal man a baron or a robber.

Still, Buffalo has clung to its business in a remarkable way during the year. Few people have gone out of business and, so far as can be recalled, none have removed to other trade centers to see if they are not doing better than we are. The fact is they are not. The word always comes in from other coal markets when our dealers return from visits there, or others come from outside, that the trade is as good here as it is anywhere. Buffalo is really a better passing point for this business or almost any business than the average, so the people stay here.

Business Changes.

A glance at the list of about 80 wholesale offices, made up early in the year, finds that the changes do not really mean much to the trade, especially as most of the people connected with the retired concerns have remained in the business here in some capacity. It also means that the volume of coal sold has gone on, though suffering like other markets by the actual falling off of the demand. In fact, as the operators as a rule are not doing as well as the jobbers are and the proportion of operators here is not great, it ought also to be a fact that we are better off than centers that have resident a large number of mine owners.

Mining Companies the Hardest Hit.

A glance at the dozen or so operating companies owned here, or the output sold here, shows that they have usually been hit much harder than the jobbers

have. One owner stated that he has turned out no coal in about a year and a half, another had been doing nothing, not even jobbing, since spring and others curtailed their operations seriously if they were running at all. In some cases the mine-owning companies allowed their operations to lapse and went into the jobbing business, for the reason that they could buy coal cheaper than they could produce it. As a rule, nobody here with a mine behind him had been active in that direction.

At the same time, somebody has been mining coal in the latter part of the year at the rate of about 10,000,000 tons a week somewhere in the country. What is the trouble? It has come about that a great part of the Buffalo-owned or managed bituminous mines are located in and about the Allegheny Valley, where the influence of the miners' union has been strongest. If such mines were to run they would have to pay at least 50 cents a ton or more for mining than non-union mines do, and that would mean a greater loss than if they shut down. So they were standing still, while coal from south of Pennsylvania came in and often took the business.

The Year in Anthracite.

The hard-coal industry did not suffer severely. The demand was mostly light, owing to lack of employment on the part of consumers and the use of substitute fuels, especially natural gas and by-product gas. This port shipped as much anthracite up the lakes and sold as much for rail shipment as the consumers would buy. There were mining difficulties but only local strikes, hence no shortage. There was some effort to escape the high prices of regular anthracite by burning small sizes or smokeless bituminous. Not much has come of it, though a promising start has been made.

Shipments of anthracite by water from this port during 1924 were 2,616,550 net tons, as against 2,907,320 tons in 1923, 1,087,830 tons in 1922 (five months' strike) and 3,810,315 tons in 1921. Buffalo ships most of the lake coal in the anthracite trade, the amount going from other ports being about 185,000 tons from Oswego and 380,000 tons from Erie. The falling off in Buffalo shipments has not been as large proportionately as from the other ports, especially Oswego.

The lake trade as a whole suffered rather badly during the season. The iron trade had been slack and ore, which really controls the lake trade, moved slowly and coal, especially bituminous, did not come to the rescue very freely. Due in part to overshipments in 1923 and in part to slack business generally, not as much coal was called for as is really needed, so a better season is looked for in 1925. The grain trade was a record breaker and really saved the lake fleet from actual loss. There had been a large amount of grain left for the spring fleet, so the lake season has a double reason for expecting activity next season.

Details of lake shipments by receiving ports the past season are: Duluth and Superior (often cleared interchangeably), 1,112,375 tons; Milwaukee, 719,100 tons; Chicago, 379,000 tons; Sheboygan, 148,200 tons; Port William (Canada), 44,500 tons; Green Bay, 35,200 tons; Waukegan, 29,500 tons; Ashland, 27,500 tons; Menominee, 15,600 tons; Escanaba, 12,500 tons; Racine, 11,080 tons; Hancock, 10,700 tons; Marquette, 9,000 tons; Manitowoc, 7,000 tons; Sault (Canada), 6,770 tons; Depere, 3,500 tons; Gladstone, 3,200 tons; Sault, Mich., 3,000 tons; Marinette, 3,000 tons; Kenosha, 2,000 tons; Sandwich (Canada), 1,800 tons; minor ports, 13,650 tons.

BITUMINOUS MINE PRICES QUOTED AT BUFFALO, 1924

We give below prices prevailing on leading brands of coal in the Buffalo market during the past year, based upon information from correspondents and obtained from reliable sources of information.

Month	Youghiogheny Lump	Pittsburgh and No. 8 Lump	Mine Run	Slack
January	$2.50	$2.00	$1.75	$1.10
February	2.50	2.00	1.75	1.25
March	2.50	2.00	1.75	1.35
April	2.50	2.00	1.75	1.25
May	2.50	2.25	1.75	1.40
June	2.50	2.00	1.75	1.40
July	2.50	2.00	1.75	1.40
August	2.25	2.00	1.75	1.40
September	2.25	2.00	1.50	1.10
October	2.25	2.00	1.75	1.10
November	2.25	2.00	1.75	1.10
December	2.25	2.00	1.75	1.10

MINE PRICES QUOTED IN PITTSBURGH MARKET, 1924

We give below prices prevailing on leading brands of coal in the Pittsburgh market during the past year obtained from reliable sources of information.

		Jan.	Feb.	Mar.	Apr.
Pittsburgh	Scr. Gas	$2.35-$2.50	$2.50-$2.65	$2.50 $2.65	$2.30-$2.50
"	Gas M. R	2.25- 2.35	2.25- 2.50	2.25- 2.35	2.25-
"	St. M. R	1.90- 2.10	2.00- 2.25	2.00- 2.25	1.75- 2.00
"	Gas Slack	1.50- 1.75	1.50- 1.65	1.40- 1.50	1.25- 1.35

		May	June	July	Aug.
Pittsburgh	Scr. Gas	2.30- 2.50	2.30- 2.50	2.30- 2.50	2.30- 2.50
"	Gas M. R	2.00- 2.25	2.00- 2.25	2.00- 2.25	2.00- 2.25
"	St. M. R	1.75- 2.00	1.75- 2.00	1.75- 2.00	1.75- 2.00
"	Gas Slack	1.30- 1.40	1.30- 1.40	1.15- 1.25	1.25- 1.40

		Sept.	Oct.	Nov.	Dec.
Pittsburgh	Scr. Gas	2.30- 2.50	2.30- 2.50	2.30- 2.50	2.30- 2.50
"	Gas M. R	2.00- 2.25	2.00- 2.25	2.00- 2.25	2.00- 2.25
"	St. M. R	1.75- 2.00	1.75- 2.00	1.75- 2.00	1.75- 2.00
"	Gas Slack	1.30- 1.40	1.15- 1.35	1.10- 1.25	1.15- 1.25

New Brunswick Coal Fields.

Coal seams of more or less importance have been discovered in many places in the Province of New Brunswick, but the most valuable and the only ones being operated are those in the Grand Lake field, about 70 miles north of St. John. The total area of the field is over 112 square miles, and it is estimated to contain from 52,000,000 to 155,000,000 tons of coal. Practically all of the coal produced is sold to the railroads.

FAIRMONT IN 1924

Year Marked by Light Production, Low Prices and Labor Disturbances in Northern West Virginia.

Although 1924 proved a tough year for most bituminous operators, there is a more optimistic slant to the new year. Local coal men have a feeling that some export business will develop; that the industry will receive some of the benefit of the general improvement of business and that a fair lake season is in sight for 1925. Indications are that a cold winter will be experienced in the Northwest, with the prospects of stocks being reduced to a minimum. Added to this is the fact that less of anthracite went forward to the docks last season than that in 1923.

Probably the most uncertain and knotty problem that the Fairmont region carries over into the new year, as an undecided issue, is its labor policy. A decision in this matter will probably mean much to the prosperity of the region. During the middle of December the non-union tonnage in the 12½ counties of the region was running a trifle over 52 per cent of the total, with the general tendency toward a larger open-shop tonnage. This is anticipated with the approach of the contracting period. The last stronghold of the union is the Monongah Division of the B. & O., with the Scotts Run Railway next in order, with a lead of two to one in the union tonnage.

Union production has completely disappeared at mines along the Charleston Division of the B. & O., the Cumberland Division, the M. & K. and the Belington, Weaver and Northern branches of the Western Maryland Railway. In the foregoing is included the Tunnelton field, which is probably one of the earliest organized fields in the State and country, dating back to the early days of the Knights of Labor. For a time the production ran 52 per cent union and 48 non-union, but the close of the lake season reduced union tonnage, and added to this was the operation of several large additional mines on an open-shop basis.

Union Losing Ground.

It would seem that the union is doomed in this field unless a sudden rise in coal prices results from car or labor shortage, both of which seem very vague at this time. Out of approximately 150 mines that were active in the middle of the month, less than 40 were working on a union basis, but most of the unionized plants are large mines.

The non-union tonnage for the year will probably approximate 35 per cent, or almost 7,000,000 tons. The non-union tonnage April 1st was somewhat limited, but it grew by leaps and bounds until it is now larger than the union output and threatens to put the whole region on that basis before long.

Probably never in the history of the region has the price variation been as pronounced. Contracts for mine-run ranged from $1.65 to $1.90, and in a few instances it may have been as high as $2.25. The spot price all year was unusually weak. In January, February and March it ranged from $1.50 to $1.55, and in April, May, June and July it was down to $1.45. Prices in the remainder of the year were as low as $1.30 to $1.40, and perhaps a slight bit lower in a few instances. Some operators probably secured prices slightly in excess of this level, however.

Output Around 19,500,000 Tons.

Indications are that production in northern West Virginia in 1924 will aggregate 19,450,000 to 19,500,000 tons. Probably 33 per cent of this coal came from Monongalia County, where the Sewickley seam has been developed more extensively than in other sections of the region.

Practically 35 per cent of the coal produced in the 12½ counties was utilized as fuel by the railroads. It will approximate 7,000,000 tons. Up to December 13th, there were 6,944,550 net tons loaded for that purpose. Mines along the Monongah, Charleston and Connellsville Divisions, B. & O., loaded 4,165,750 tons, consisting of 1,688,800 tons of B. & O. fuel and 2,476,950 tons of foreign fuel.

One of the real developments has been the heavy railroad fuel loading along the Monongahela Railway, which jumped to 1,249,400 tons, and the Scotts Run Railway, where it aggregated 867,950 tons. On the Western Maryland branches 526,400 tons of railroad fuel were loaded, and on the Cumberland Division of the B. & O., which includes the M. & K., there were 135,050 tons.

Lake shipments from this region in 1924 were 802,500 tons, compared with 2,531,950 tons in 1923. Lake shipments from mines along the Monongah Division aggregated 558,650 tons; while the consignments from the Scotts Run Railway were 243,850 tons.

Average cost of production at mines paying the 1920 scale is about $2.20 to $2.25. Most of the mines worked at a loss last year, whether union or non-union, although the open-shop mines naturally lost the least money. The cost to non-union mines has been heavy in some instances, especially where large plants were opened.

The end of the year found the United Mine Workers on the defensive, with such large concerns as the Bethlehem Mines Corporation (the coal operating end of the Bethlehem Steel Co.) and the New England Fuel & Transportation Co. operating on an open-shop basis. Violence marked the last six months of 1924, and while restraining orders and injunctions helped to quiet things, the region was the scene of much violence.

As a means of solving the labor situation and keeping costs down to a minimum a number of large coal companies insalled the latest coal cutting and loading devices. This tended toward economy, but the costs cannot be made low enough to meet non-union competition. In several instances, at least, the open-shop mines in the field have installed similar machinery. The actual labor cost on a ton of non-union Fairmont coal, based on the 1917 scale, ranges from 90 to 94 cents. The union rate will range from $1.25 to $1.30, it is said.

There has been no change in the existing coal prices in the field this week. Mine-run is quoted at $1.40 to $1.60; slack at $1.15, and lump at $1.55 to $1.60. Little slack is being called for, because the cement mills have closed down to take inventory.

Divisional coal production in Northern West Virginia in 1924 was as follows, according to figures compiled by the Northern West Virginia Coal Operators' Association: B. & O.-Monongah Division, 9,701,550 tons; Charleston Division, 864,900 tons; Connellsville Division, 91,450 tons; Cumberland Division, 1,342,400 tons; Scott's Run, 2,628,150 tons; Monongahela, 3,803,700 tons; W. M.-Bellington, Weaver & Northern, 485,150 tons; Wyatt-Bingamon and Helen's Run branches, 991,700 tons.

YEAR 1924 AT CHICAGO

Great Volume of Coal Was Sold During Season But with Much Sacrifice of Profits—Contract Business Difficult to Secure.

The Chicago wholesale and operating firms sold a great volume of coal during the past year as they have in previous years and as they will do in the future, but the total business transacted included much sacrifice of profits by various factors.

The year 1924 was one of low running time at the mines, especially those in "union" territory, a year of less than normal demand and consumption, and one of keen competition and narrow margins for the mine owners.

Considering the late fall and winter in 1923, the year 1924 opened most encouragingly for the coal men. On January 1st Chicago had its first below zero weather and throughout the month of January temperatures hovered about that figure, giving Chicago one of the coldest January months on record, and also giving the coal men a flying start for business early in the new year.

February was also a good month for the coal men, with a sustained demand for domestic coals following the cleanout of home bins during the first month of the year. The demand for steam coals was also good during the early months of the year, with the industrials taking enough coal to keep the ratio of production between prepared and screenings at an equitable level.

About the end of the "coal year" the market turned to one of dullness and apparent lack of demand from all classes of users. Prices tumbled to very low levels during the month of April and from that time forward the year was an uphill fight for the coal men selling through the Chicago market.

Inactivity During Summer.

Throughout the spring and summer months inactivity continued uninterrupted, except for the occasional buying flurries which always promised to bring the market out of the rut, but which were invariably short lived and of little consequence.

As the summer wore away, buying naturally improved and September, October and December could well be classed as good months, while November lacked its usual snap and less coal was sold in a wholesale way that month than in either September or October.

Right through the year contract business was most difficult to secure by either operators or wholesalers. This was probably due to the general hesitancy on the part of business men, in view of a pending national election. Many feared that the election might go the wrong way for the successful promotion of business and hence hesitated to make any commitments which might need to be delayed or eliminated. As a result of this policy few contracts covering the year, or even six months, were placed and more coal was bought on the open market from week to week.

With the open market business, rather than the contract business, forming the bulk of the trade during the past year, it is easy to understand why competition was so keen and price continually the prime factor. Non-union operators in the Kentucky field grasped the opportunity and periodically sold many big consuming elements in this section who formerly confined their purchases to the nearby fields. Western Kentucky operators were handicapped at various times of the year by

labor troubles, and had it not been for that fact, the operators in that field would doubtless have had their biggest year in the Chicago market. As it was, they turned a good volume of business here.

Non-union competition has been a great hindrance to the operators of Illinois and Indiana. The union mines are tied up with the workers at a high wage scale, which keeps their production cost up to a high, fixed amount, which must be reflected in the prices they are asking the coal buyers to pay. In some cases during the year lump coal was sold below cost in order to keep the mines operating on screenings contracts. The reverse of that situation was also true during the late summer months.

Illinois business men have evidenced considerable worry over the plight of the Illinois coal operators during the year. More than 200 mines in the state were idle for the greater part of the year and many have been closed for good. Meetings were called during the year of business men, railroad officials, mine owners and miners in an attempt to show the miners that they would make more money by working at a lower wage, allowing the Illinois operators to compete successfully over a wider territory and thus keep the mines steadily operating. The results of these meetings were discouraging. In some cases the representatives of the miners' unions failed to attend the meetings.

The average running time of the mines that did operate in Illinois during the year was less than 50 per cent compared with 65 and 70 per cent in past years. Operators differ in their opinion as to the real cause of the hard times in the coal trade, especially with reference to nearby states. Some say the high wage paid to the miners makes it necessary to charge unreasonable prices, others say there are too many mines, while still others lay the cause to the increase in oil-burning equipment.

One or all of these factors may have contributed to the slow business for Illinois operators during the year, but from general observation, it is evident that the year-to-year increase in the natural coal requirements of the public, both for domestic and steam coals, has not kept pace with the increase in the coal-producing capacity of the country, for if it had, there would be no mine idleness to speak of. Not only have new mines been opened but old mines have been improved to produce a greater daily tonnage. While it is true that many mines have also been "played out" during the last decade, this factor, as well as the normal increase in the country's coal requirements, has been more than off-set by the increase in productive capacity.

Anthracite Supplies Sufficient.

Supplies of anthracite reached Chicago during the year in quantities sufficient to meet the demand. There was no shortage of hard coal in this section during the past year, nor has there been any surplus to speak of. Anthracite coal will probably be the first coal in this section of the country to feel the oil-burner competition. Hard coal is expensive here, and the better homes of the middle classes and the well-to-do take the bulk of this coal. It is into these homes that the oil-burning equipment is being installed.

As yet the competition from the liquid fuel is hardly noticeable, but many of the new homes being erected are including this class of heating equipment, while a number of old homes have replaced coal with oil. The oil burner, however, is still in the experimental stage and it remains for some safe economical apparatus to be devised before the coal men suffer to any extent from this competition.

Smokeless coals, with the exception of the first two or three months, were slow moving in the Chicago market, with prices falling most of the year. There were many operators with a surplus of Pocahontas to offer the trade almost throughout the year and as a result the advances in prices of this coal were checked almost as soon as they were announced. In August and September large quantities of this coal were put on the "bargain counter" and dealers stocked up heavily on the coal at that time. As a result of the slow fall season the dealers were then unable to re order on this coal and as a result Pocahontas slumped off materially in sales during October and November of this year.

MINE PRICES QUOTED IN COLUMBUS MARKET, 1924

We give below prices prevailing on leading brands of coal in the Columbus market during the past year, obtained from reliable sources of information.

	Jan.	Feb.	Mar.	Apr.
Smokeless lump	$3.15-$3.50	$3.25-$4.00	$3.75-$4.00	$3.25-$3.50
" M. R.	1.75- 2.00	2.00- 2.25	2.00- 2.25	2.15- 2.35
" Screen	1.20- 1.45	1.45- 1.70	1.45- 1.70	1.75- 2.00
Kanawha lump	2.50- 2.75	2.50- 2.85	2.40- 2.70	2.40- 2.70
" M. R.	1.50- 1.75	1.50- 1.75	1.40- 1.65	1.50- 1.75
" Screen	1.00- 1.25	1.10- 1.25	1.00- 1.10	1.10- 1.30
Hocking lump	2.50- 3.00	2.50- 3.00	2.40- 2.70	2.25- 2.65
" M. R.	1.65- 2.00	1.75- 2.00	1.75- 2.00	1.50- 1.75
" Screen	1.25- 1.40	1.10- 1.20	1.00- 1.10	1.25- 1.40
	May	**June**	**July**	**Aug.**
Smokeless lump	3.25- 2.60	3.50- 3.85	3.75- 4.00	3.50- 3.75
" M. R.	2.20- 2.35	2.20- 2.45	2.10- 2.35	1.85- 2.15
" Screen	1.75- 2.00	1.00- 1.50	1.10- 1.50	1.15- 1.30
Kanawha lump	Strike	Strike	2.00- 2.25	2.00- 2.25
" M. R.	"	"	1.40- 1.60	1.30- 1.55
" Screen	"	"	.90- 1.10	1.00- 1.15
Hocking lump	"	"	2.25- 2.65	2.25- 2.65
" M. R.	"	"	1.60- 1.85	1.45- 1.65
" Screen	"	"	1.30- 1.45	1.00- 1.15
	Sept.	**Oct.**	**Nov.**	**Dec.**
Smokeless lump	3.00- 3.50	4.25- 4.50	4.00- 4.25	4.00- 4.25
" M. R.	1.85- 2.15	2.10- 2.35	1.75- 2.25	1.75- 2.25
" Screen	1.15- 1.30	1.15- 1.30	1.20- 1.35	1.20- 1.35
Kanawha lump	2.00- 2.25	2.00- 2.25	2.35- 2.75	2.10- 2.50
" M. R.	1.30- 1.55	1.30- 1.55	1.40- 1.75	1.45- 1.65
" Screen	1.00- 1.10	.85- 1.00	.85- 1.05	.80- 1.00
Hocking lump	2.25- 2.55	2.40- 2.65	2.40- 2.75	2.35- 2.75
" M. R.	1.45- 1.65	1.50- 1.75	1.50- 1.70	1.50- 1.75
" Screen	1.10- 1.25	.85- 1.00	.65- .85	.75- .90

Ninety billion cubic feet of gas and ten billion kilowatt-hours of electricity were used in New York State in 1924, both new records.

BITUMINOUS MINE PRICES QUOTED AT CHICAGO, 1924.

We give below prices prevailing on leading brands of coal in the Chicago market during the past year, based upon information from correspondents and obtained from other reliable sources of information.

	Jan.	Feb.	Mar.	Apr.
Smokeless lump	$3.00-$3.25	$3.00-$3.50	$3.50-$3.75	$3.00-$3.25
" M. R.	2.00- 2.25	2.50-	2.15- 2.25	2.00- 2.25
Franklin, Ill., lump	3.25- 3.75	3.25- 3.75	2.75- 3.00	2.75- 3.00
" M. R.	2.25- 2.50	2.25- 2.50	2.25- 2.50	2.25- 2.50
" Screen	1.70- 2.00	1.70- 2.00	2.00- 2.25	2.00- 2.25
Central, Ill., lump	3.00- 3.25	3.00- 3.25	2.50- 2.75	2.50- 2.75
" M. R.	2.00- 2.25	2.00- 2.25	2.00- 2.25	2.00- 2.25
" Screen	1.60- 1.75	1.40- 1.60	1.60- 2.00	1.80- 2.10
Ind. 4th Vein lump	3.00- 3.25	3.00- 3.25	2.75- 3.00	2.75- 3.00
" M. R.	2.50- 2.75	2.50- 2.75	2.25- 2.50	2.25- 2.50
" Screen	1.75- 2.00	1.65- 1.80	1.90- 2.00	1.90- 2.00
Ind. 5th Vein lump	2.50- 2.75	2.50- 2.75	2.25- 2.50	2.25- 2.50
" M. R.	2.00- 2.25	1.85- 2.00	2.00- 2.25	2.00- 2.25
" Screen	1.60- 1.80	1.40- 1.50	1.75- 1.85	1.75- 1.85
West. Ky. lump	2.75- 3.00	2.75- 3.00	2.15- 2.50	2.15- 2.50
" M. R.	1.50- 1.75	1.50- 1.75	1.50- 1.75	1.50- 1.75
So. E. Ky. lump	2.75- 3.25	3.00- 3.25	2.00- 2.50	2.00- 2.50
" M. R.	1.75- 2.00	1.75- 2.00	1.25- 2.00	1.25- 2.00

	May	June	July	Aug.
Smokeless lump	3.00- 3.25	3.25-	3.50- 3.75	3.75- 4.00
" M. R.	2.00-	1.75- 2.00	1.75- 2.00	1.75- 2.00
Franklin, Ill., lump	2.50- 3.00	2.50- 3.00	2.50- 3.00	2.75- 3.25
" M. R.	2.25- 2.50	2.25- 2.50	2.25- 2.50	2.25- 2.50
" Screen	2.00- 2.15	1.85- 2.00	1.60- 1.80	1.60- 2.10
Central Ill. lump	2.50- 2.75	2.25- 2.50	2.25- 2.50	2.50- 2.75
" M. R.	2.00- 2.25	2.00- 2.25	2.00- 2.25	2.00- 2.25
" Screen	1.80- 2.10	1.60- 1.85	1.65- 1.90	1.55- 1.80
Ind. 4th Vein lump	2.75- 3.00	2.50- 3.00	2.50- 2.75	2.50- 3.00
" M. R.	2.25- 2.50	2.25- 2.50	2.25- 2.50	2.25- 2.50
" Screen	1.90- 2.00	1.75- 1.90	1.60- 1.80	1.75- 1.85
Ind. 5th Vein lump	2.25- 2.50	2.25- 2.50	2.35- 2.60	2.25- 2.75
" M. R.	2.00- 2.25	2.00- 2.25	2.00- 2.25	2.00- 2.25
" Screen	1.70- 1.85	1.60- 1.75	1.50- 1.65	1.40- 1.65
West. Ky. lump	2.00- 2.50	1.90- 2.10	1.90- 2.25	2.15- 2.45
" M. R.	1.50- 1.75	1.40- 1.60	1.50- 1.75	1.35- 1.75
So. E. Ky. lump	2.00- 2.50	2.00- 2.25	2.20- 2.35	2.35- 2.65
" M. R.	1.25- 2.00	1.25- 1.75	1.25- 1.75	1.35- 1.90

	Sept.	Oct.	Nov.	Dec.
Smokeless lump	3.75- 4.00	3.75- 4.00	4.00-	3.75- 4.00
" M. R.	1.85- 2.00	1.85- 2.00	1.75- 2.00	1.75- 2.00
Franklin, Ill., lump	3.25- 3.50	3.25- 3.50	3.25- 3.50	3.25- 3.50
" M. R.	2.25- 2.50	2.25- 2.50	2.25- 2.50	2.50
" Screen	1.60- 1.75	1.25- 1.50	1.25- 1.50	1.55- 1.65

	Sept.	Oct.	Nov.	Dec.
Central Ill. lump	2.50- 2.75	2.75- 3.00	2.75- 3.00	2.75- 3.00
" M. R.	2.15- 2.25	2.15- 2.25	2.15- 2.25	2.15- 2.25
" Screen	1.35- 1.60	1.20- 1.35	1.20- 1.30	1.50-
Ind. 4th Vein lump	2.75- 3.00	3.00- 3.25	3.00- 3.25	2.85- 3.25
" M. R.	2.25- 2.50	2.25- 2.50	2.25- 2.50	2.25- 2.50
" Screen	1.50- 1.70	1.25- 1.50	1.40- 1.50	1.75- 1.90
Ind. 5th Vein lump	2.40- 2.65	2.75- 3.00	1.75- 1.90	2.50- 2.75
" M. R.	2.00- 2.25	2.00- 2.25	2.00- 2.25	2.00- 2.25
" Screen	1.40- 1.50	1.25- 1.40	1.25- 1.35	1.40- 1.55
West. Ky. lump	2.25- 3.00	2.75- 3.00	2.50- 3.00	2.25- 3.00
" M. R.	1.75- 1.85	1.35- 1.95	1.40- 1.80	1.25- 1.80
So. E. Ky. lump	2.25- 2.50	2.75- 3.00	2.50- 3.00	2.40- 3.00
" M. R.	1.50- 1.75	1.50- 1.75	1.50- 1.75	1.50- 1.75

Chicago Freight Rates.

The new freight rates on coal to Chicago from the various producing points effective July 1st, 1922, compared with the old rates, are as follows:

	Old	New		Old	New
Central Illinois	$1.81	$1.65	W. Va. (Pocahontas)	3.58	3.24
Southern Illinois	2.17	1.95	East Kentucky	3.43	3.09
Belleville, Ill.	2.06	1.85	West Kentucky	2.40	2.16
Brazil, Ind.	1.78	1.60	Ohio Hocking	3.18	2.80
Sullivan, Ind.	1.88	1.69	Anthracite (Penn. net tons)	5.63	5.07
W. Va. (High Vol.)	3.43	3.09			

Tonnage Handled at South Amboy.

It has often been said that the Pennsylvania RR. piers at South Amboy, N. J., handle more coal than any other loading port in New York harbor, but in 1923 the Port Reading piers handled more coal than was handled at South Amboy. We give below a tabulation showing the operations in gross tons over a term of years:

Year	Bituminous	Anthracite	Total	Coke Net
1912	3,562,810	888,239	4,451,049	10,297
1913	4,291,953	1,160,656	5,452,609	11,800
1914	3,657,520	1,466,773	5,124,293	13,815
1915	4,158,938	1,111,125	5,270,063	16,338
1916	4,197,494	1,022,054	5,219,548	16,048
1917	4,113,570	757,515	4,871,085	5,858
1918	4,838,028	600,340	5,438,368	364
1919	3,393,754	569,445	3,963,199	1,597
1920	4,618,178	715,135	5,333,310	.....
1921	3,533,172	589,689	4,122,861	.....
1922	2,102,552	569,910	2,672,462	.....
1923	2,995,705	825,956	3,821,661	92,656
1924	2,193,673	785,039	2,978,712	12,806

YEAR 1924 AT CINCINNATI

Volume of Business Fairly Large but Profit Margins Inadequate.

The year 1924 was not a satisfactory one for the operators in the Cincinnati coal market. Volume of business was relatively large, because the operations in the related districts of production were largely non-union and therefore comparatively unrestricted, but the profit margins were small and, because of the frequent prevalence of distress conditions, there were a good many losses to subtract from them. With rare periods throughout the year, a buyer's market prevailed.

January began with weather that encouraged active domestic buying, following general December curtailment. Steam demand was off, but prices were fairly sustained by crippled transportation conditions which restrained marketing. Domestic rates showed a tendency to stiffen and many producers were out of the market on this kind of coal.

The demand held up during February. In the meantime many of the non-union mines readjusted wages back to the November scale of 1917. Winter rail troubles persisted and prices went a little higher, largely on this account, on domestic grades. Later in the month, domestic demand fell off and the market went softer. Call for steam grades was below normal and prices were unfavorably affected.

Depression Follows Wage Agreement.

In March the Jacksonville agreement, giving assurance that there would be no strike, had the effect of turning steam users to their reserves. Domestic sales fell to a low ebb and a policy of general curtailment was found necessary. Kanawha operators refused to sign the scale and that district became idle.

Depression prevailed in April. Buyers preferred to use the open markets to fill their requirements and few contracts were made. In the meantime, lake buying began on a small scale, chiefly for nut and slack. Rate was very low.

There was a very low tonnage in May. Most of the coal that moved went to lake ports at prices affording a bare margin, while Kentucky shipments began to the Northwest all rail under a more favorable freight differential.

In June, while steam coal was weak, there was some export call, lake export grew and summer domestic buying started, so that the market showed a better tone, though prices still were very low.

In July tidewater demand was off but domestic and lake selling were better. In August these more favorable conditions were accentuated and there was a strong call for slack which seemed to be displacing mine-run in the steam markets.

In September both domestic and lake demand improved, but under conditions that left price-making largely in the hands of the buyer, who left a narrow profit on production. In the latter part of the month, however, brisk domestic buying started and prices in these grades as well as on others advanced and held until the middle of October, when mild weather and reduced lake buying renewed the depression which became a habit with the end of lake navigation and the consequent end of lake buying. Prices suffered and the tonnage record went down, though steam and by-product demand was better.

December was somewhat spasmodical as to domestic demand, but suffered a temporary slump in steam and by-product orders by reason of the near approach of invoice day. Curtailment followed a season of distress and demoralization.

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MINE PRICES IN CINCINNATI MARKET, 1924

We give below prices prevailing on leading brands of coal in the Cincinnati market during the past year, based upon information from correspondents and obtained from other reliable sources of information.

	Jan.	Feb.	Mar.	Apr.
Smokeless lump	$2.75-$3.50	$3.50-$4.00	$3.00-$3.50	$3.00-$3.50
" M. R.	2.00- 2.50	2.50- 2.75	2.00- 2.50	2.00- 2.25
" Screen	1.50- 2.00	1.75- 2.00	1.50- 2.00	1.65- 2.00
West Va. lump	2.25- 3.00	3.00- 3.25	2.75- 3.00	2.25- 2.50
" Gas M. R.	1.35- 2.00	1.65- 1.85	1.35- 1.50	1.15- 1.50
" Screen	1.10- 1.50	1.25-	.75- 1.00	.85- 1.25
" Steam M. R.	1.35- 2.00	1.65- 1.85	1.35- 1.50	1.15- 1.50
S. E. Ky. lump	2.25- 3.25	2.85- 3.25	2.75- 3.00	2.00- 2.50
" M. R.	1.25- 2.00	1.65- 1.85	1.35- 1.60	1.00- 1.50
" Screen	1.00- 1.50	1.25-	.70- 1.00	.75- 1.25

	May	June	July	Aug.
Smokeless lump	3.50-	3.75-	3.50- 4.00	3.75- 4.00
" M. R.	1.75- 2.00	1.75- 2.00	1.65- 2.00	1.75- 2.00
" Screen	1.50- 2.00	1.40- 1.65	1.25- 1.50	1.25- 1.50
West Va. lump	2.00- 2.25	2.00- 2.50	2.00- 2.25	2.00- 2.50
" Gas M. R.	1.25- 1.50	1.25- 1.50	1.25- 1.50	1.45- 1.65
" Steam M. R.	1.25- 1.50	1.25- 1.50	1.25- 1.50	1.35- 1.50
" Screen	1.00- 1.10	.75- 1.00	.80- 1.10	.85- 1.00
S. E. Ky. lump	2.25- 2.50	2.00- 2.50	2.25- 2.50	2.25- 2.50
" M. R.	1.25- 1.50	1.25- 1.75	1.25- 1.65	1.40- 1.75
" Screen	.80- 1.10	.75- 1.00	.75- 1.10	.85- 1.15

	Sept.	Oct.	Nov.	Dec.
" M. R.	1.75- 2.00	2.25- 2.50	1.75- 2.00	1.75- 2.00
Smokeless lump	3.75- 4.00	3.75- 4.00	3.50- 4.00	3.50- 4.00
" Screen	1.00- 1.10	.90- 1.10	.85- 1.10	.75- 1.15
" Steam M. R.	1.25- 1.50	1.35- 1.50	1.30- 1.45	1.35- 1.50
" Screen	1.25- 1.50	1.25- 1.35	1.10- 1.25	1.00- 1.25
West Va. lump	2.15- 2.50	2.75- 3.75	2.35- 3.00	2.25- 3.00
" Gas M. R.	1.35- 1.60	1.40- 1.65	1.40- 1.50	1.35- 1.50
S. E. Ky. lump	2.25- 2.75	3.00- 3.75	2.50- 3.00	2.50- 3.00
" M. R.	1.25- 1.65	1.35- 1.75	1.30- 1.65	1.25- 1.60
" Screen	1.00- 1.10	.90- 1.15	.85- 1.10	.75- 1.00

MINE ACCIDENTS IN 1924.

Accidents at coal mines in the United States during the year 1924 resulted in the death of 2,381 men, according to the U. S. Bureau of Mines. The figures represent a decrease of 77 from the fatality record of 2,458 for the year 1923.

The 2,381 deaths in 1924 represented a fatality rate 4.27 per million tons of coal produced, as compared with a rate of 3.74 per million tons in 1923, based on 2,458 deaths. Production in 1924 was approximately 558,000,000 tons as against 657,000,000 tons in the previous year.

THE NORTHWEST IN 1924

Business of an Extensive Territory Now in a Deplorable State—Coal Men Themselves to Blame.

The coal business in the Northwest has been in a deplorable state for several years, and has had little or no real chance of overcoming it. The general commercial conditions alone have been distressing and serious enough to create depression. But there has been what might be termed a temperamental attitude on the part of the members of the trade themselves that has augmented the situation unnecessarily.

Like many other commodities, there appears to be too many in the business for the normal volume—if indeed there are not too many for even an extraordinary volume. However, the excess, if there be such, cannot be legislated out of existence, nor can they be banned commercially, except through the natural laws whereby some fall by the wayside.

This is readily recognized by all members of the trade. They know that business cannot be expanded on any initiative of the coal trade, except in some manner of capturing from a competitor. Instead, the consumption of coal is confined to the minimum required by the user, except insofar as the user is ignorant of the best methods of coal-using which result in wasteful ways.

With these conditions recognized, it would seem that selling organizations would endeavor to meet the situation as it is, rather than to fight the inevitable. Other lines of production find that it does not pay to wrestle too strenuously with competitors, and so gauge production in accord with the present and probable demand. But in the coal trade, there appears to be a too-individualistic temperament, whereby each feels so confident of his own ability to outsell his competitor. And the result is a continuous donation party, with the collective consumer as the ungracious and ungrateful recipient.

It is possible, too, that the buyers have better men in their purchasing departments—men able to make "boobs" of the sellers by playing the game that is as old as the time of King Solomon, who wrote of the clever purchasing agent of his day, saying, "'It is naught, it is naught,' saith the buyer, but when he goeth his way, he boasteth."

Too Much Competition.

The past year might have been one of less grief to the coal trade, had its members been less keenly competitive in an endeavor to make business develop where little existed. In this district, particularly, the agricultural situation has been flat up to the fall and the harvest. It was shown in every way. Country banks were closing because of frozen assets and very limited business. Manufacturing which sought the local trade was confined to modest limits. Jobbing was cut down and the railroads had an easy time handling their traffic. This meant that fuel consumption was certain to be restricted, and all records showed that it was. Up to the fall, there was but a meager buying demand, aside from what he deemed fairly constant—the domestic consumer's minimum requirements.

These conditions would readily justify the coal trade in acting as would many other trades—reducing their stocks, restricting the traveling expenses and otherwise meeting the situation. In a measure, some of this was done, but there

was also a wild outburst of competitive aggressiveness which merely meant a switching around of customers, retaliation and retribution. It probably did not add to anyone's total sales materially. It did result in cuttings of cost and concessions which would otherwise not have been made. And the boastful buyer was the only one to profit.

Many Oil Burners Not Successful

There has been a rather new feature to endure—the competition of fuel oil for domestic use principally. There have been a few installations of oil burners in office building and industrial plants, but the great percentage of them has been for domestic units, usually individual homes and a few duplex residences. This has been somewhat like an epidemic that had to run its course, although the situation has become greatly improved. The oil-burner business as shown by the classified lists of city and telephone directories is a changing one. New concerns burst forth with new and untried devices, and in a few months they are gone. Some simply go, others dissolve in bankruptcy and others revise and reorganize. Such devices are installed, tried for a while and torn out—sometimes to be replaced by other makes and sometimes replaced by coal as fuel.

Ferment in Railroad Rate Situation.

The railroad rate situation has been in a ferment and much of it remains. Pending actions before the Interstate Commerce Commission served as a basis of hopes for future increased tonnage that seemed to keep some marking time perpetually until the new rates were to ease the market pressure. But it might be accepted as axiomatic that where there is tonnage there will be competition for it, and sharply revised railroad rates mean different competitors rather than less of them. While the changes are not wholly developed, due to suspensions and delays, yet it is found that there has been no real notable improvement to any single class of trade.

The fall since the better crops were harvested and the better prices thereon ruled, might have given the coal trade some advantage beyond that which they seemed able to develop. Coal buying is not to be developed beyond a limited extent, and with a better appreciation of the probabilities, more margin might have been obtained on the same tonnage, had there been less of a wild scramble, the minute some business appeared. It might take a little education, and perhaps a little sacrifice in the period of education, but it is certain that none is going to sell at low prices indefinitely, if it appears possible to get a little more.

Census Data on Anthracite.

The Census Bureau issued a statement making some comparison between conditions in the anthracite region in 1909 and 1919. It is stated that the number of mine workers decreased from 169,000 to 147,000 during the decade, but production last year was 6,302,000 tons greater than in 1909.

The value of coal produced increased from $145,881,000 to $364,243,000, while wages advanced from $92,169,000 to $210,202,000.

Mine operators had an invested capital of $246,713,000 ten years ago, but the properties were estimated to be worth $432,391,000 in 1919. An analysis of the operators' expenses showed that while they paid taxes aggrgating $7,969,000 in 1909, the taxes in 1919 were $11,762,000, and their rents and royalties grew during the period from $3,356,000 to $14,066,000.

1924 AT HAMPTON ROADS

Past Year Marked Turn from Former Prosperity in Coal Trade—Supply and Demand on Closer Basis.

A general view of the coal industry will show that the year 1924 was what might be termed as the turning point or pivotal period in the coal trade, because conditions in this particular trade have reverted to a point that might be called the "survival of the fittest" in that during the war period and a period subsequent thereto, a considerable expansion took place in this trade, which under normal conditions could not exist. The outcome of this expansion meant the closing up of many operating mines which took place during the year of 1922, and later in the year other mines were forced to discontinue business because of existing conditions at that time, and it might be said that other mines will continue to cease operation, until such time as only those mines will be left whose costs will permit operation at a profit on the market.

With the highest cost of operating mines eliminated, and others now being operated on a strictly logical and economical basis, it is believed that the time is near at hand when supply and demand will be on a closer basis and become a factor in the economical phase of this business.

This, like many other industries of its kind, averages over a given period of time. During the past year it has been entirely a buyers' market, and yet when viewed from every angle it was not as bad as it might have been, especially when one considers the years during which the coal industry enjoyed a sellers' market. Last year the operators insisted on running their mines regardless of the effect made upon the market, and the production was sold continually, thereby forcing the market down to levels well below the cost of production.

Coal Sacrificed.

Due to this fact and in order to find a market for the coal it was necessary to sell or rather sacrifice it to a buyer who had no use for it; resulting in many cases where the coal was stored in a pile for future use, and at the early part of the current year there was aconsiderable amount of this coal still piled up, leaving the operators at the mercy of the buyer.

Some are still of the opinion that the bottom of conditions in this industry has not yet been reached, and say that anything done in the industry, such as temporary shutdowns, etc., with a view of stabilizing the market, will be nothing more or less than vain efforts to stave off the inevitable, which is closing up, and building up generally along strictly legitimate lines all through the industry, both as to production and marketing.

Operators as a whole, it is believed, are seeing the silver lining appear above the dark clouds which have hovered over the trade for the past year, due principally to the competitive fuels that have been permitted to creep in without any resistance on the part of the coal operators. Competitive fuels climbed into prominence rapidly, because the coal men were in the dumps and practically down and out, so to speak. Sellers of competitive fuels took advantage of this fact and saw the time was propitious and took time by the forelock to get in on the market.

Advancing prices of competitive fuel is now a factor of considerable importance

to the consumer from an economical standpoint, and is attracting wide attention. For this reason it appears that the coal men are beginning to gain confidence in themselves and their product, saying that the rapid strides into the various lines, which normally belong to the coal men, may work as a boomerang, and they will find themselves in over their heads. In fact this very condition is confronting them at this period and has for some time past.

Oil Losing Ground.

Oil has already lost considerable ground, the Briquette business is also faltering and the same is so with every other substitute for coal on the market. Consumers in a great many cases who have tried other fuels have about now decided that they don't want substitutes for the old original fuel if it is possible to get the original as wanted and at price which might be considered fair.

The larger and influential men in the coal business are pessimistic, and believe that a large part of the existing conditions are chargeable to them, because of the lack of confidence in their product and inability to get transportation and other operating costs back on a normal basis. However, they are eliminating competition in the industry just as fast as they can, and will continue to force the smaller forces in the game out of business; bearing in mind a possibility of reduction in transportation rates, which have existed since the war and should by now be considerably lower than they are.

Prices during 1924 are evidence that the coal men do not want robber prices to exist and discredit the industry more or less continually. The prices received at the mines has been somewhat less than the rail transportation rate from the mines, which is considered a detrimental factor to the trade, and should in the near future be looked into by the operators.

The coal operators as a whole are mature business men of reputation and ability, and they desire to see things put back where they belong, and on a normal basis. When they have accomplished this, you will not see any passive resistance to competition, but will see aggressive sales tactics backed up by sound production policies.

Hampton Roads Dumpings.

Tonnage of coal handled over the piers at Hampton Roads for the year 1924 and three years previous:

	1924			Total,	Total		
	N. & W.	C. & O.	Virginian	1924	1923	1922	1921
January .	654,169	312,028	320,364	1,286,561	1,194,557	937,665	1,425,209
February	651,633	348,895	417,820	1,418,348	1,147,029	1,099,378	1,026,913
March ...	666,966	359,400	397,933	1,424,299	1,523,362	1,497,141	962,914
April	527,420	312,466	362,137	1,202,023	1,389,978	1,409,430	1,253,446
May	464,375	297,363	416,804	1,178,542	1,395,777	1,542,043	1,830,624
June	439,594	423,383	357,957	1,220,934	1,175,144	1,756,479	2,210,826
July	537,110	414,266	393,855	1,345,231	1,454,877	1,330,364	1,628,318
August ..	605,429	435,957	400,500	1,441,886	1,522,740	1,297,973	1,119,389
September	474,229	443,035	422,479	1,339,743	1,207,993	1,178,630	884,121
October ..	505,205	415,377	473,899	1,394,481	1,234,844	1,011,806	1,058,860
November	457,605	420,018	438,857	1,316,480	1,041,571	820,883	985,167
December	642,513	423,204	509,743	1,575,460	1,243,771	1,027,732	924,195
Totals	6,626,248	4,605,392	4,912,348	16,143,988	15,531,643	14,909,525	15,310,022

Hampton Roads Prices, 1924.

We give below prices prevailing on leading brands of coal in the Hampton Roads market during the past year obtained from reliable sources of information.

	January		February	
	Net Mines	Gross Piers	Net Mines	Gross Piers
Pool 1	$2.33-$2.53	$4.85-$5.05	$2.23-$2.43	$4.75-$4.95
2	2.08- 2.23	4.60- 4.75	2.03- 2.13	4.55- 4.65
5 and 7	1.73- 1.88	4.35- 4.50	1.78- 1.88	4.40- 4.50
	March		April	
Pool 1	1.98- 2.13	4.50- 4.65	1.68- 1.83	4.20- 4.35
2	1.78- 1.93	4.30- 4.45	1.43- 1.53	3.95- 4.05
5 and 7	1.48- 1.58	4.10- 4.20	1.18- 1.28	3.80- 3.90
	May		June	
Pool 1	1.83- 2.03	4.35- 4.55	1.88- 2.03	4.40- 4.55
2	1.63- 1.78	4.15- 4.30	1.63- 1.78	4.15- 4.30
5 and 7	1.38- 1.48	4.00- 4.10	1.38- 1.53	4.00- 4.15
	July		August	
Pool 1	1.83- 1.93	4.35- 4.45	1.58- 1.68	4.10- 4.20
2	1.68- 1.78	4.20- 4.30	1.43- 1.53	3.95- 4.05
5 and 7	1.38- 1.53	4.00- 4.15	1.28- 1.38	3.90- 4.00
	September		October	
Pool 1	1.43- 1.68	3.95- 4.20	1.83- 1.98	4.35- 4.50
2	1.38- 1.48	3.90- 4.00	1.63- 1.78	4.15- 4.30
5 and 7	1.18- 1.33	3.80- 3.95	1.33- 1.48	3.95- 4.10
	November		December	
Pool 1	1.68- 1.83	4.20- 4.35	1.48- 1.68	4.00- 4.20
2	1.53- 1.63	4.05- 4.15	1.33- 1.43	3.85- 3.95
5 and 7	1.33- 1.48	3.95- 4.10	1.48- 1.58	4.10- 4.20

Bituminous Coal Exports to Cuba.

Exports of bituminous coal to Cuba by months, during 1924 and six years previous, were (gross tons):

Month	1918	1919	1920	1921	1922	1923	1924
January	76,938	103,639	99,620	55,033	41,240	59,664	50,000
February	145,104	40,644	130,846	42,213	50,101	55,511	38,288
March	170,087	38,107	115,982	74,963	57,258	51,173	28,960
April	212,355	58,173	118,654	28,346	47,144	51,713	28,020
May	137,048	90,112	113,861	14,345	38,020	43,608	28,884
June	110,959	84,198	107,609	71,750	17,517	39,929	27,356
July	105,137	75,085	94,019	33,282	22,500	57,530	44,337
August	105,408	108,216	123,610	48,318	10,629	46,807	67,183
September	98,022	140,546	125,156	31,748	31,709	47,382	46,184
October	89,941	115,366	115,380	43,328	48,702	52,680	51,358
November	99,679	59,835	117,976	28,014	34,973	32,665	50,794
December	89,779	57,478	69,919	53,262	64,065	71,957	71,858
Total	1,440,457	977,399	1,322,632	524,572	463,858	610,619	534,751

JOHNSTOWN IN 1924

Year Started Off Well, but It Was Largely a Period of Depression.

The year 1924 should go down in the annals of coal history as one of unbounded trials and tribulations. Perhaps that description is too strong for the first two months of the year. January and February were without a doubt the best months so far as actual sales and tonnage produced are concerned, due to the spectre of a bituminous strike when the old agreement expired April 1, 1924. During these two months consumers apparently stocked their bins to the limit, with the result that when the strike did not come they found themselves with plenty of coal on hand.

In March business dropped to a rather marked extent. Any number of large consumers dropped completely out of the market, with the result that tonnage began to pile up at the mines, and no place to send it to. Surprising as it may seem, prices did not slump off to any extent. They were at that time about as low as they could possibly go without a readjustment of wages and costs.

In April and May the volume of sales again dropped off, but this time with a light reduction in price. Beginning about the first of April, the non-union operators took the lay of the land with regard to lower wages. By the first of May they had succeeded in making these reductions and were selling coal at lower prices than ever.

June, July and August proved to be better than April and May with regard to volume of sales, probably due to a falling off in tonnage caused by the shutdown of many union mines. Those that continued to produce were in slightly better shape, and it was at this time the first faint rays of hope began to manifest themselves.

The last three months of the year were much better and the local trade took a more hopeful view of the situation. There is no getting around the fact that business was better than it had been since February last.

Few Operators Have Made Money.

Perhaps the most discouraging feature of the year was the price situation. Only operators mining a very high grade of coal made any money at all, and they have not made what is their just due. In the union field practically fifty per cent of the operations going in 1923 were shut down from March to the present time. They could not pay the union wage scale and still meet competition with the non-union coals from the Somerset and contiguous fields. In some cases the operators made a little money, but only where they were fortunate enough to have low cost mines or were mining high grade coal at prices somewhat above the general market. Other operators who kept going did so only to cut the overhead and make the loss as small as possible.

With the non-union operators, however, conditions were vastly different. As the situation became worse, they were able to reduce wages and thus keep their heads above water. In some instances they reduced the wages to the 1917 scale and even lower, but in most cases a compromise was reached which did not make such a big cut. The non-union field produced practically its normal tonnage all through the year.

There were a number of cases where mines formerly working with union

men switched to non-union labor, and several of these were right in the heart of the union field. Labor has been plentiful and it was relatively easy to engineer the change.

Conditions with the miners have for the most part been good. There has been no actual suffering, privation or want. They have not had the money to spend as in former years, but have been able to live. Naturally the non-union men, while they are making less money per ton, are working regularly and as a result they have been more fortunate.

Railroads Too Efficient.

The railroads have been very efficient during the year. In fact, they have been too efficient in placing empties when there were no orders.

Business from New England has been sadly lacking. Not until the past month or two has Pennsylvania been getting much of it.

Contract shipments were disturbed in very few instances. During the flurry in January and February this class of buyers were not compelled to stock up and so took the coal as per their agreements. New contracts were few and far between, buyers preferring to take their chances and get coal at the low market prices. Contract inquiries were answered with prices slightly above the market. Buyers seemed to think they should get the coal for the prevailing market price, and so there was very little contracting done.

A number of Central Pennsylvania low volatile operators have installed screens during the past year and are putting a screened smokeless coal on the eastern market in competition with anthracite. Reports seem to indicate that this type of domestic fuel is making headway and will soon be very popular. Also, there seems to be some little market for screened cannel coal, a small amount of which is produced in the Central Pennsylvania field.

Hampton Roads Exports and Foreign Bunkers.

Exports of coal and coke also bunker tonnage supplied at the Hampton Roads ports during 1923 and 1924 were:

	Exports							
	Anthracite		Bituminous		Coke		Foreign Bunker	
Month	1923	1924	1923	1924	1923	1924	1923	1924
Jan.	....	....	59,158	201,150	227	...	92,741	127,001
Feb.	....	....	49,838	292,884	....	191	80,282	123,515
Mar.	....	....	187,374	220,834	....	...	98,202	128,108
Apr.	2,678	....	189,594	307,950	....	...	104,110	137,008
May	....	....	336,478	278,113	....	...	116,569	131,303
June	....	....	192,438	281,538	....	...	91,514	116,747
July	4,274	....	433,956	329,733	270	102	115,883	131,421
Aug.	....	....	267,685	303,479	11,255	87	106,046	99,301
Sept.	4	....	142,619	261,741	....	293	76,466	97,988
Oct.	....	....	170,800	204,514	....	...	94,729	123,687
Nov.	....	....	118,758	160,650	....	...	89,654	110,522
Dec.	....	....	181,876	282,450	....	129	112,477	156,361
Total	6,956	....	2,334,574	3,125,036	11,752	802	1,178,673	1,482,962

WEST VIRGINIA

West Virginia is the second largest coal producer in the Union, being well entrenched in this prominent position as the result of a dozen years' steady progress after it first surpassed Illinois, long its rival for second place. The trade of West Virginia is interesting, not only because of its extent, but because of the variety of coal found within its borders.

In the northern part of the State there is the Wheeling district where a localized industry is carried on, and near to the eastern boundary the Upper Potomac field, rather closely identified with the coal interests of Maryland. The important district in Northern West Virginia is the Fairmont, which is not only one of the largest producers in the State but one of the oldest. The larger part of the tonnage is produced in southern West Virginia, as there are two important districts there, the New River, served by the C. & O. and Virginian, and the Pocahontas, served by the Norfolk & Western, and tributary to these are minor districts: the Kanawha, adjacent to the New River field, and the Tug River, Thacker and Kenova are more or less adjacent to the Pocahontas field and likewise served by the Norfolk & Western Ry. The Kanawha district is an old-established seat of the mining industry, dating back to the time when the only outlet was by water, and, as our records show, a certain amount is still forwarded by boat. But the New River field dates from the opening of the Chesapeake & Ohio Ry., as the fields further south date from the opening of the N. & W.

Naturally, the early records of coal mining in West Virginia are merged with those for the State of Virginia, so that the records for the new State commence with the important tonnage of 444,648 tons for the year 1863. Considering the vicissitudes of mining in other States remarkably successful progress was made in West Virginia. The 1,000,000-ton mark was reached in 1873; the 2,000,000-ton mark in 1882, and with rapid strides the output increased beyond that point, gaining nearly a million tons a year and going far beyond 10,000,000 tons in 1893. From this point it took but seven years to reach the 20,000,000 ton mark; only five years more to get up to 32,000,000 tons, and from then on every year has shown great progress.

The development of the State as a coal producer has been due largely to the interest taken in the industry by the railroad companies serving the section. It was frequently asserted in prior years that the coal areas were opened in advance of requirements in order to afford tonnage for the railroads, and certainly they secured it, even though the mining interests of Pennsylvania and Ohio had to face very strong opposition because of that fact. And not only was capital forthcoming in ample volume because of railroad influence, but the most energetic sales organizations were established with a view to building up business with the least loss of time.

For years the Baltimore & Ohio was closely identified with important interests in the northern part of the State; the Chesapeake & Ohio with those of the New River field, and the Norfolk & Western with interests in the more

southerly part of the State But it is now 25 years since in deference to public opinion and subsequent legislation the railroad interest has gradually been relaxed and in that time many entirely independent interests have been added to the number of companies not originally associated with the transportation interests.

In fact, the producing interests of West Virginia are notably diversified, there being very few companies of such predominating influence as are to be found in certain sections of the State of Pennsylvania and any other of very large coal producing States.

The tonnage produced has been as follows in recent years:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1913	71,308,982	1917	86,441,667	1921	72,200,000
1914	71,107,626	1918	89,935,839	1922	80,488,192
1915	77,184,069	1919	79,030,553	1923	107,899,941
1916	86,460,127	1920	89,450,707	1924	110,000,000

Over the past half century the records show:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1873	1,000,000	1893	10,708,578	1913	71,308,982
1878	1,120,000	1898	16,700,999	1918	89,935,839
1883	2,335,833	1903	29,337,241	1923	107,899,941
1888	5,498,800	1908	41,897,843		

West Virginia Mine Inspectors.

The complete list of West Virginia inspectors, district to which assigned and post office address is:

Chief, Department of Mines, R. M. Lambie, Charleston, W. Va.

District	Inspector	Post Office
1st,	C. W. Stuart	Thomas
2nd,	W. H. Sandridge	Grafton
3rd,	Evan L. Griffiths	Clarksburg
4th,	William Moore	Morgantown
5th,	W. B. Riggleman	Fairmont
6th,	A. E. Lafferty	Moundsville
7th,	Thomas Jarrett	Weston
8th,	V. E. Sullivan	Charleston
9th,	Eli J. Mason	Charleston
10th,	Zach Evans	Handley
11th,	John E. Hamilton	Eskdale
12th,	J. A. Porter	Gauley Bridge
13th,	Robert R. Fields	Hinton
14th,	Robert Lilly	Mount Hope
15th,	W. L. McGinnis	Beckley
16th,	C. C. Rumburg	Matoaka
17th,	Thomas Stockdale	Freeman
18th,	W. D. Lee	Maitland
19th,	W. H. Prentice	Iaeger
20th,	S. T. Lambert	Matewan
21st,	J. F. White	Logan
22nd,	C. E. Foster	St. Albans
	C. O. Morris, director of mine rescue stations	Charleston
	J. R. McCune, inspector of sand mines, etc.	Martinsburg

The railroads of the United States could effect a saving of 15,000,000 tons of coal annually were the water for locomotives softened by a lime preparation, it was reported by the committee on lime of the American Society for Testing Materials.

NORTHERN WEST VIRGINIA OUTPUT.

Tonnage Comparison—Years 1920, 1921, 1922, 1923, 1924.

District	1920	1921	1922	1923	1924
B. & O.-Monongah, Charleston & Connellsville Divns.	13,572,850	8,944,500	7,733,600	16,013,200	10,657,900
B. & O.-Cumberland Divn.	1,897,350	551,150	1,784,800	1,829,250	1,342,400
Western Maryland Ry.	2,242,200	1,298,500	1,257,700	2,495,650	1,476,850
Monongahela Ry.	3,752,450	2,341,000	2,472,950	3,958,900	3,803,700
Scott's Run Ry.	1,293,200	1,250,350	1,655,450	3,530,450	2,628,150
Total	22,758,050	14,385,500	14,904,500	27,827,450	19,909,000

Distribution of Shipments.

	1921	1922	1923	1924
Total East	8,849,300	9,181,200	13,779,700	10,834,050
West	683,800	923,850	1,838,350	868,500
Local railroad fuel	1,730,850	1,651,100	2,979,950	2,091,650
Foreign railroad fuel	2,472,100	2,508,850	6,951,350	5,312,250
Lake	649,450	639,500	2,278,100	802,550
Total	14,385,500	14,904,500	27,827,450	19,909,000

Coal Shipments on the Kanawha River.

Shipments by water in the calendar years named from collieries below the Kanawha Falls are stated by the Resident Engineer in charge of the United States navigation works to have been as follows:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1914	1,052,560	1918	1,091,640	1922	727,100
1915	1,205,530	1919	741,900	1923	1,366,230
1916	1,366,400	1920	1,320,180	1924	703,550
1917	1,428,900	1921	938,900		

Total coal shipments in 1924 amounted to 703,550 tons, of which 653,200 tons were external and 50,350 internal.

Canadian Exports by Provinces.

Provinces	1920	1921	1922	1923	1924
Nova Scotia	1,245,673	727,951	623,416	679,771	341,307
New Brunswick	113,050	71,534	63,901	115,364	31,019
Prince Edward Island	2	2	.....	.....	.....
Quebec	1,372	85	56,403	3	9,005
Ontario	.....	10	.....	877	.....
Head of Lakes	.....	.....	75	.....	.....
Manitoba	721	1,690	2,154	8,213	3,617
Saskatchewan	3,132	2,633	5,167	11,510	4,728
Alberta	3,106	843	821	605	435
British Columbia	1,191,167	1,182,528	1,069,431	838,017	383,135
Yukon	.....	.....	.....	46	.....
Total net tons	2,558,223	1,987,276	1,821,277	1,654,406	773,246

ILLINOIS

The coal fields of Illinois cover a large portion of the State and the industry has an interesting history. The coal in the most northerly, or La Salle, district was the first referred to by any explorer traversing this country, Father Marquette, 1676.

The coal in the upper counties, in some areas well within 100 miles of Chicago, was in the early days, at least, very near the surface and as is generally the case in such instances, of poor quality. Much of this having been mined out, recourse has been had to the seams in other fields.

As one traverses to the southward, passing through the Fulton, Springfield, Belleville, Murphysboro and Franklin districts down to the Harrisburg field, the coal is found at increasing depth, but the improvement in the quality of it is such as to well repay the greater investment and the greater expense of operation. Off to one side, adjacent to the Indiana boundary, is the Danville field.

The level surface of Illinois, as well as its central position on the map, led to a vast amount of railroad building in the State, affording at once a tremendous home market for coal and a great outlet to markets beyond the State lines.

The first recorded output was 6,000 tons in 1833. The business had grown to 150,000 tons in 1845, and reached the million mark in 1864. The influence of Western railroad development is plainly discernible from that time on, the output reaching the two million ton mark in 1868, the three million ton mark in 1871 and the five million ton mark in 1876. From the frequency with which round numbers appear it is evident no very definite record of output was kept prior to 1880. In 1883 the tonnage had reached 12,000,000 tons, and after that time various fluctuations occurred which retarded the growth so that the 20,000,000 mark was not reached until 1897. There have been ups and downs in the meantime, but the average yearly progress has been great, the output increasing to 51,000,000 tons in the next 10 years, and great progress has been made in the intervening time, as our tables show.

Production in following years was:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1915	58,829,576	1919	60,862,608	1922	58,467,736
1916	66,195,336	1920	88,630,893	1923	79,310,075
1917	86,199,387	1921	69,602,762	1924	67,880,000
1918	89,291,105				

Some of the coal mining districts have now achieved a venerable age, while even the newer ones of the tidewater sources of supply have reached what might be termed middle age. For instance, the Blossburg district was opened in 1840, Georges Creek in 1842, Broad Top in 1850, Clearfield 1866, Meyersdale 1872, Chesapeake & Ohio 1878, Elk Garden 1881, Norfolk & Western 1883, and the Beach Creek in 1884.

MARYLAND

The coal deposits of Maryland represent one of the oldest fields of exploitation. Although always, in modern days, a comparatively small factor considered from the tonnage standpoint, the high quality of the greater part of the Maryland coal and its proximity to important consuming centers have caused it to play an important part in the coal trade of the Atlantic seaboard.

The coal fields are in the western part of the State beyond Cumberland, the entire section being formerly known as Allegany County. Subsequently Garrett County was set off, embracing all the territory beyond the summit near Frostburg. The Georges Creek basin, the most important, lies about two-thirds in Allegany County and one-third in Garrett County. Further west is found the Castleman basin and at the extreme western part of the State are the Lower Youghiogheny basin and the Upper Youghiogheny basin. But the only important active coal operations are in the first named district.

There is record of coal mining in Maryland at the very outset of the 19th Century and as early as 1832 an output of 12,000 tons was recorded. While an increased output was shipped as soon as the Baltimore & Ohio Railroad reached Cumberland, which was in 1842, the real developments did not come until later on, in the year 1850, when the Chesapeake & Ohio Canal was built, as well as branch lines from Cumberland, which afforded quite extensive facilities to the coal operators of the Georges Creek field.

The output rose from 175,000 tons in 1849 to 812,000 tons in 1854, at which time Maryland was exceeded as a coal producer only by Pennsylvania and Ohio. Notwithstanding the great demand for coal during the Civil War, the fact that the Baltimore & Ohio Railroad was often cut by the Confederates kept down the output materially, but in 1865 it passed the million mark and even then Maryland ranked as the fourth State, being surpassed only by Pennsylvania, Ohio and Illinois.

An output of 2,216,000 tons was attained in 1869 and 3,198,000 in 1873. After that the region experienced marked vicissitude and not until 1887 was the latter figure surpassed. The 4,000,000 ton mark was exceeded in 1896, but by this time West Virginia and Alabama had been added to the list of large producers and the relative importance of Maryland was decreasing.

The output of 1901 exceeded five million tons, as did that of 1902, 1905, 1906, 1907 and 1910, but no time since then has so large an output been attained and Maryland is now surpassed as a coal producer by a dozen States and possibly one or two more. At a number of mines all of the Big Vein coal has been extracted and coal from the smaller or Tyson seam now constitutes a material part of the shipments.

The tonnage in the years named has been, in net tons:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1913	4,779,839	1917	4,745,924	1921	1,827,740
1914	4,133,547	1918	4,497,297	1922	1,222,707
1915	4,180,477	1919	3,021,686	1923	2,285,926
1916	4,460,046	1920	4,030,239	1924	1,720,000

Distribution of Maryland shipments originating chiefly on the Cumberland & Pennsylvania RR., the chief and once the only outlet from the Georges Creek mines, and the Georges Creek & Cumberland, now part of the Western Maryland, has been as follows:

Year.	B. & O. R. R.	C. & O. Canal.	Penn. R. R.	W. Md.	Total.
1915	1,791,402	174,320	163,157	898,280	3,027,159
1916	1,558,803	158,155	173,332	1,130,397	3,020,687
1917	1,457,186	151,258	173,696	1,485,224	3,267,364
1918	1,572,160	138,122	236,712	1,258,896	3,205,884
1919	878,673	133,571	120,448	902,713	2,035,405
1920	1,444,097	127,905	265,205	1,032,433	2,869,640
1921	822,878	66,540	91,708	386,421	1,367,047
1922	445,096	58	65,671	209,083	719,908
1923	702,742	56,405	179,501	435,827	1,374,475
1924	546,534	.....	117,915	242,007	906,456

The coal tonnage of Maryland, as reported by the C. & P. RR. Co., connecting with other lines at Cumberland, excludes output from certain mines sometimes included in the Upper Potomac basin of West Virginia. While these mines are located in Maryland, the coal is transported across the river into West Virginia and there loaded on cars for shipment. In addition there is also to be added to the above figures, in arriving at total output, coal used at mines and locally from small mines and country banks, amounting to over 400,000 tons; also the output of Garrett County mines shipped via the B. & O., which amounts to about 100,000 tons annually.

The first mining company was incorporated in 1836. After the construction of the Baltimore & Ohio RR., in 1842, and the Chesapeake & Ohio Canal, in 1850, the output from the Maryland mines increased rapidly. The attempt to ship coal from the mines to barges, prior to advent of the B. & O. RR., was not long continued. The method was too destructive to life and was the cause of so much loss in coal that it was soon abandoned, and it was not until 1842 that the industry really began to assume importance.

California.

California has practically ceased to be a factor in the commercial production of coal, for, while mining has been carried on since 1861 when a tonnage of 6,620 tons was reported, and the output was frequently above 100,000 tons during the '60s and '70s (in fact nearly a quarter of a million tons in 1880), it has declined to almost nothing in recent years, the downward tendency having been only temporarily checked when one concern or another undertook to develop the mineral deposits of the State.

While the coal resources are rather extensive, the coal is lignitic in character and cannot be sold to advantage in competition with fuel from British Columbia and from other States of the Union or from the oil so largely used on the coast. The deposits are located not far from San Francisco.

OHIO

With its coal fields located in the eastern part of the State, adjacent to the great and long-established industrial district centering about Pittsburgh and with many old-established railroad lines traversing the State, Ohio early became an important coal-producing section, having a substantial tonnage record as far back as 1838 and continuing to be a greater coal producer than Illinois up to 1870, when the difference in favor of the more westerly State was but nominal. During the '70s there were various back and forth movements. Labor difficulties and other local causes resulted in fluctuation of output in one State and another, but in 1883 Ohio had to yield the palm to Illinois, and about 15 years later was surpassed by West Virginia also.

Ohio contains the celebrated Hocking field which for many years furnished a high grade domestic coal widely known throughout the West. This has in more recent years been displaced by the smokeless coals of West Virginia and the development of the natural gas fields some 30 or 35 years ago has also been a factor operating against the coal industry of Ohio. The operators of this State have also had to contend with unfair freight rates in years gone by, but nevertheless the tonnage trebled in the 20 years between 1898 and 1918. Since then the tonnage has fallen off very materially, and of the shipments from Lake Erie ports, which constitute so important a factor in the trade, a considerable percentage now represents coal from West Virginia.

The tonnage of this State in the years named has been as follows:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1913	36,285,468	1917	41,677,986	1921	31,942,776
1914	18,182,940	1918	47,849,236	1922	26,953,791
1915	22,627,046	1919	35,876,682	1923	40,546,443
1916	34,526,552	1920	45,032,653	1924	29,200,000

New Mexico.

The principal coal fields of New Mexico are in the northwestern part of the State adjacent to the Atchison, Topeka & Santa Fe Ry. The mining industry of that State is directly associated with the growth of railroad requirements, and commencing with a tonnage of 21,000 in 1881 it rapidly advanced to a basis of 500,000 to 600,000 tons per annum, reaching the million mark in 1899 and 2,628,000 in 1907 and continuing well above 3,000,000 tons every year since 1909.

As in other sections of the Southwest the use of coal is much restricted by reason of the large supply of fuel oil that is available.

The tonnage in the years named has been as below:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1913	3,708,806	1917	4,000,527	1921	2,453,482
1914	3,877,689	1918	4,023,239	1922	3,147,173
1915	3,817,940	1919	3,138,756	1923	2,915,173
1916	3,793,011	1920	3,683,440	1924	2,550,000

Arkansas.

The coal fields of Arkansas are in the central western part of the State, extending eastward from the old town of Fort Smith. Arkansas has long been known as a producer of coal, some output having been mentioned as far back as 1840, and specified in the official returns again in 1860. But not until 1880 was there a continuous record of coal output available, for Arkansas in the '60s and '70s, to go no further back, was a wild place and little thought was given to statistics.

Commencing with an output of 25,000 to 50,000 tons per annum in the early '80s, the production amounted to half a million tons with the commencement of the next decade, and with the development of the Southwestern railroads it advanced to a matter of 1,205,000 tons in 1898, and passed the two million mark in 1903.

Since then there has been little or no growth, as the development of oil in the Southwest has militated against increased steam trade, and the fact that Arkansas is largely a wooded country, with a comparatively mild climate, restricts the production of coal for domestic purposes, particularly as coal of better quality can be had from Oklahoma.

The tonnage in recent calendar years has been as below:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1913	2,234,107	1917	2,143,579	1921	1,227,777
1914	1,836,540	1918	2,227,369	1922	1,110,046
1915	1,652,106	1919	1,429,020	1923	1,296,892
1916	1,994,915	1920	2,050,596	1924	1,300,000

Utah.

The coal fields of Utah are large and, while scattered, are for most part within easy access of Salt Lake City and larger towns in the northern part of the State. With the development of transportation facilities in the Rocky Mountain section and the general building up of that part of the country Utah has developed as a coal producer. The coal trade of the State is of comparatively modern origin, amounting to no more than 50,000 tons in 1876 and standing at 200,000 tons in 1886. It doubled in the next ten years, and since 1900 has increased very substantially from the 1,147,000 tons then recorded, as shown by the details that we give below.

The tonnage in the years named has been:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1915	3,108,715	1919	4,631,323	1923	4,720,217
1916	3,567,428	1920	6,005,199	1924	4,460,000
1917	4,125,230	1921	4,078,784		
1918	5,136,825	1922	4,992,008		

The record production of coal on the Norfolk & Western Ry. was reached during 1923, when 30,415,205 net tons of coal were mined. The next highest production of coal was in 1922, when 30,012,942 net tons were mined.

Alabama.

Alabama has a singular record of long-continued production on a modest basis, succeeded by a period of sudden and rapid growth. The coal fields are in the northern central portion of the State, where the population was very small in the early days. There was an output of 946 tons in 1840, but not until 1860 did the output exceed 10,000 tons, and a period of 16 years elapsed before the 100,000 ton mark was passed.

It was not until the early '80s that the coal industry of Alabama as we know it today became a feature. At that time the exploitation of the iron ores of the Birmingham district was commenced, and in the past 30 years, as is well known, a great industrial center has been developed in that territory. Beginning with an output of 2,492,000 tons in 1885, the figures mounted rapidly or with some set-backs through the three, four, five, six. seven, eight, nine and ten million ton marks, when it reached 10,354,570 tons in 1902. As our records show it has doubled in the intervening time, although, as is customary in the case of districts depending on the iron and steel business, there are marked ups and downs in the record.

Tonnage in years named has been as follows:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1913	17,907,284	1917	20,068,074	1921	12,568,899
1914	15,520,943	1918	19,184,962	1922	18,324,740
1915	14,027,937	1919	15,536,721	1923	20,457,649
1916	18,234,625	1920	16,140,099	1924	19,490,000

Kansas.

The earliest record of coal production of Kansas dates from 1869, but as the amount then reported was 36,891 tons it is probable that mining was carried on several years before that time.

The coal fields, three in number, are all in the eastern part of the State within easy access of the important consuming territory in and about Kansas City.

The output first exceeded one million tons in the year 1884 and grew rapidly in the next five years, reaching three million tons in 1892 and passing the four million ton mark in 1900. Since then the growth has been at a fluctuating rate, exceeding seven million tons on several occasions.

The tonnage in the years named has been as below:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1915	6,824,474	1919	5,224,724	1923	4,035,404
1916	6,881,455	1920	5,838,408	1924	4,150,000
1917	7,184,975	1921	3,466,641		
1918	7,561,947	1922	2,955,170		

Prof. Polievoy, famous archaeologist of Moscow, states that the part of Saghalin which is occupied by the Japanese has enormous deposits of coal, estimated at 130,000,000,000 poods (One pood equals 36 pounds.) He states that the Japanese are coaling their entire fleet with fuel obtained from Saghalin.

Michigan.

The Michigan coal basin occupies, theoretically, a very large area in the central part of the State, but mining operations are confined to four small districts, of which that centering about Saginaw is the most important.

Coal was mined in Michigan on a small scale as far back as the Civil War and in the early '80s the tonnage exceeded 100,000 tons annually. From that time it decreased to 70,000 tons in 1894, but with the development and equipment of certain mines on a modern basis, prompted by the needs of the old Flint & Pere Marquette R. R. Co., considerable progress was made during the next few years and the tonnage reached 1,241,000 tons in 1901. It increased to 2,035,858 tons in 1907, which is the largest amount ever produced in one year in Michigan.

The coal of the State is not of a particularly high quality and has to meet on a competitive basis with tonnage from other States, in some districts of which there is the further advantage of better mining conditions.

Coal tonnage produced in Michigan during a series of years has been:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1913	1,231,786	1917	1,374,805	1921	1,141,715
1914	1,283,030	1918	1,464,818	1922	929,390
1915	1,156,138	1919	996,545	1923	1,172,075
1916	1,180,360	1920	1,487,765	1924	820,000

Tennessee.

Like the neighboring State of Alabama, Tennessee has a long-extended coal trade history. There was an output of 558 tons recorded in 1840 and the production mounted steadily year by year until it reached 100,000 tons in 1855. The business was seriously interfered with by the Civil War and the resulting depression in the affairs of the South, not surpassing 200,000 tons until 1872. The State continued a larger coal producer than Alabama until 1883, and since then Tennessee has decreased considerably in relative importance, although output increased to 2,165,585 tons in 1890 and to 3,022,895 tons in 1898. In recent years the figures have not varied greatly from the 6,000,000-ton mark, although 1910 was a particularly good year.

The Tennessee mines are in narrow belt territory, extending north from the neighborhood of Chattanooga, the celebrated Jellico field being in the northern part thereof. This tonnage is largely used throughout the South for domestic purposes, even in proximity to the coal mines of Alabama, and finds some outlet in the neighboring State of Kentucky, also.

The tonnage has been as follows in past several years:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1913	6,860,184	1917	6,194,221	1921	4,460,226
1914	5,943,258	1918	6,831,048	1922	4,876,774
1915	5,730,361	1919	5,213,205	1923	6,040,268
1916	6,137,449	1920	6,585,228	1924	4,800,000

Oklahoma.

The coal fields of Oklahoma are in the eastern part of the State, running down through the more southerly portion, south of the Canadian River. Coal mining in this State was carried on in but a limited way, while it was reserved as the Indian Territory, and while tonnage was mined for local use many years ago, it was not until 1880 that a definite record was obtainable as to the amount, the output for that year being recorded as 120,947 tons.

It grew quite steadily year by year without any material variation from that time on, passing the million mark in the first year of Statehood, and, aside from labor difficulties in 1894, showing a continuous though less rapid growth from that time on, surpassing two million tons for the first time in 1901, leaping forward to 3,500,000 tons in 1903, but afterwards slipping back and not materially surpassing that figure until ten years later.

Since then the coal mining industry in Oklahoma has been practically stationary, the availability of fuel oil of course greatly restricting coal trade activities throughout the Southwest. The mines of Oklahoma, unfortunately, generate large quantities of gas, and the dust is highly explosive.

On the whole, the coal fields of that State, Arkansas and Texas are among the least attractive from an operating standpoint, and will doubtless be at a disadvantage as long as the oil wells of the Southwest continue as heavy producers:

The tonnage of coal mined in Oklahoma in recent years has been as follows:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1915	3,693,580	1919	3,802,113	1923	2,885,038
1916	3,608,011	1920	4,830,288	1924	2,800,000
1917	4,386,844	1921	3,362,623		
1918	4,813,447	1922	2,802,511		

Montana.

Like the adjacent State of Wyoming, Montana has a great amount of coal within its borders, divided between numerous deposits in districts of various sizes. The most important is in the southeastern part of the State adjacent to the Sheridan field of Wyoming.

While there were small outputs reported in the '80s, the coal business of the State did not really assume importance until 1890 when the opening of new railroad lines caused the tonnage to reach 517,477 tons. The million ton mark was reached five years later. The output reached 2,016,857 tons in 1907 and since then has fluctuated year by year with an upward tendency as indicated below.

The tonnage in the years named has been as below:

Year.	Tons.	Year.	Tons.	Year.	Tons
1913	3,240,973	1917	4,226,689	1921	2,733,958
1914	2,805,173	1918	4,532,505	1922	2,572,221
1915	2,789,755	1919	3,236,369	1923	3,147,678
1916	3,632,527	1920	4,403,866	1924	2,700,000

Virginia.

Virginia has an interesting history as a coal-producing field, the Richmond basin having been the earliest source of coal supply on the seaboard. As early as 1822 the State turned out 54,000 tons and then exceeded in importance the coal industry of Pennsylvania. In 1828 the tonnage stood at 100,000. In 1838 it was 300,000, the high-water mark being achieved in 1840, when the figure of 424,894 was recorded. Later the adjacent Farmville coal areas were exploited, coal therefrom being hauled by rail to a point on the James River.

With this tonnage taking the place of the decreasing supplies of the Richmond basin an output of 473,350 tons was achieved in 1860. From 1862 forward for 20 years the coal business in this State was on a very modest basis, but at that time the celebrated Pocahontas fields in the western part of the State were opened and the output mounted rapidly to 1,073,000 tons in 1888. There was a period of recession subsequently, but by 1894 the tonnage reached new high levels and attained the figure of 2,105,791 tons in 1899.

While only a small portion of the Pocahontas field is in Virginia, the development of the Clinch Valley district and other fields in the southwestern part of Virginia has served to greatly augment the tonnage from the State.

The tonnage of this State has been as below in years named:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1913	8,828,068	1917	10,087,091	1921	7,492,378
1914	7,959,535	1918	10,289,808	1922	10,491,174
1915	8,122,596	1919	9,326,830	1923	11,761,643
1916	9,707,474	1920	11,244,106	1924	10,900,000

Colorado.

Of the production of coal in Colorado, about half comes from the Trinidad field in the southern portion of the State, where, also, nearly all the coke is produced. These fuels are utilized generally at the iron and steel plants at Pueblo. Coal is mined at many other places in the State, such as the Walsenburg district, the Durango and Canon City fields and elsewhere. The supplying of coal to the city of Denver and to railroads and communities to the northward not readily reached from the Wyoming fields count for the greater part of the trade of the outlying sections.

Production of coal in Colorado during the past several years was:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1913	9,232,510	1917	12,483,336	1921	9,122,760
1914	8,170,559	1918	12,407,571	1922	10,019,597
1915	8,624,980	1919	10,323,420	1923	10,346,218
1916	10,484,237	1920	12,278,225	1924	9,840,000

Maryland's production is slipping year after year. Only 1,720,000 tons of coal were produced there in 1924, a decrease of 565,926 tons compared with 1923 and 107,740 tons less than in 1921.

Kentucky.

Kentucky is an interesting State from a coal trade standpoint. Its coal fields belong in two separate and distinct basins, the western field being the interior coal basin while the eastern field is in a portion of the Appalachians. Early developments were in the western part of the State, an output of 328 tons being recorded in 1828. As early as 1845 the output had reached 100,000 tons, reached 200,000 in 1855, but not until 1873 was the 400,000-ton mark reached, the fluctuations being quite marked in the intervening time.

The output got up to 1,000,000 tons in 1879 and continued quite steadily on the basis of 2,000,000 or 3,000,000 tons per annum until the opening of the large mines in the eastern part of the State in the late '90s. As the new century came in the Kentucky production had reached 5,469,000, and thereafter increased nearly 1,000,000 tons per year until the recent past when even more rapid progress has been made. The coal of the eastern part of the State is particularly high in quality and finds a wide market throughout the West and Northwest.

The tonnage in recent years has been as follows:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1913	19,421,288	1917	27,807,971	1921	31,588,270
1914	20,168,150	1918	31,612,617	1922	42,134,175
1915	21,361,674	1919	30,036,061	1923	44,777,317
1916	25,393,997	1920	35,528,762	1924	45,000,000

Iowa.

The coal fields of Iowa are particularly restricted to supplying the home market. More so than in any other State is the coal utilized for local purposes. The principal producing fields center about Des Moines and extend north and south in the central portion of the State, so that there is not so much opportunity to make shipments beyond the limits of the state of origin as the coal cannot compete in distant markets when necessary freight charges have been paid. Being readily accessible for home use, many mines selling their product by wagon delivery in neighboring cities and towns, the coal industry of Iowa became established at a very early date, a small output being recorded as far back as 1840, and at the close of the Civil War the output had grown to 69,574 tons, which was much more than Virginia produced in that year. In 1878 the output had grown to 1,250,000 tons, and for many years subsequent to 1883 the output remained steady at between 4,000,000 to 5,000,000 tons.

The tonnage in years named has been as below:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1913	7,525,936	1917	8,965,830	1921	4,531,392
1914	7,451,022	1918	8,192,195	1922	4,335,161
1915	7,614,143	1919	5,624,692	1923	5,710,735
1916	7,260,800	1920	7,774,916	1924	5,100,000

Missouri.

The principal coal field of Missouri is situated in the northern central portion of the State, centering about Columbia and Huntsville. The State is one of the oldest of coal producers, records extending back to 1840, when there was an output of 9,972 tons reported. Even as far back as 1850 there was an estimated output of 100,000 tons.

The first railroad in the Far West, as it was then called, the Hannibal & St. Joseph, crossed the Missouri coal fields and furnished, at once, a market and an outlet for them. Tonnage increased to 500,000 tons in 1867 and 1,000,000 in 1876. The two million ton mark was passed in 1882 and the three million mark only three years later.

From then on there was a fluctuating tendency and the four million mark was not attained until 1903. Only recently has the output surpassed five million tons.

The coal of Missouri is not of particularly high quality and is not dealt in to any material extent in markets outside of the State. Even local markets are not secure in view of the competition that is encountered when trade is dull and producers in other fields have to seek an outlet.

Coal tonnage produced in Missouri during a series of years has been:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1915	3,811,593	1919	3,979,798	1923	3,403,151
1916	4,742,146	1920	5,266,565	1924	3,140,000
1917	5,670,549	1921	3,551,621		
1918	1,464,818	1922	2,924,750		

Texas.

Texas is one of the few States in which the production of lignite constitutes an important feature. Lignite is a low grade of bituminous. It constitutes something more than two thirds of the tonnage of bituminous produced in that State, and while representing a fuel in which the process of carbonization has made less progress than in the case of fuels of higher grade, it serves a useful purpose in that State of magnificent distances, and generally mild climate where a high grade domestic fuel is not especially required.

The coal industry in Texas is of modern development, the first official returns dating from 1884, when a tonnage of 125,000 was reported. There was not as much as a million tons produced in any year up to 1901, and the output has never exceeded 2,500,000 tons, as indicated by the figures below. The bituminous mines are chiefly in the northern central part of the State while the lignite mines are in the eastern part of the State.

The tonnage in the years named has been as below:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1915	2,088,908	1919	1,680,656	1923	1,187,329
1916	1,987,503	1920	1,615,015	1924	1,075,000
1917	2,355,815	1921	972,839		
1918	2,261,135	1922	1,106,007		

Indiana.

The coal fields of Indiana have their upper limit in the western central part of the State, adjacent to the Danville district of Illinois, and extend in a broadening field down to the Ohio River, embracing all the southwestern counties of the State.

While the Indiana block coal field early established a good reputation on a certain limited tonnage it was not until recent times that the coal fields of Indiana had aught but a strictly local market.

An output of 9,632 tons was recorded in 1840, but not until 1860 did the tonnage reach 100,000 tons, and although it touched 1,000,000 tons in 1873 reactions followed, so that it did not reach the 2,000,000 ton mark until 1882. The output continued on a basis of about 3,000,000 tons a year for about 10 years, finally reaching the 4,000,000 ton mark in 1897, which may be considered approximately the commencement of modern development in Indiana, the next 10 years showing a growth of 13,985,713 tons.

The tonnage in the years named has been as below:

Year	Tons	Year	Tons	Year	Tons
1913	17,165,671	1917	26,077,182	1921	20,319,509
1914	16,641,132	1918	30,678,634	1922	19,132,889
1915	17,006,152	1919	20,912,288	1923	26,229,099
1916	20,093,528	1920	29,090,585	1924	22,340,000

Wyoming.

Wyoming contains one of the greatest coal reserves to be found in the United States. The deposits are divided into two large areas and several small ones embracing, in the aggregate, nearly half the area of the State.

The development commenced at the time the Union Pacific Railroad was constructed and the principal mines are in the southern part of the State adjacent to the line of the road. More recently mines tributary to the Burlington system have been opened in the northeastern part of the State.

In 1870 the tonnage was estimated at 50,000 tons, and in 1880 it had grown to 589,595 tons. It passed the million mark in 1887, the two million mark four years later, the three million mark in 1889 and the four million mark in the next year. The five million mark was soon passed, as was the sixth. An output of 7,533,088 was attained in 1910, and since then a steady rate of growth has been maintained, with but minor fluctuations year by year. Much of the coal is of high quality and is widely used for domestic purposes.

The following tabulation shows the output of Wyoming in recent years, the figures in each case being for the fiscal year ending September 30:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1913	7,050,541	1917	8,575,619	1921	7,200,666
1914	7,186,587	1918	9,438,688	1922	5,971,724
1915	6,268,989	1919	7,219,738	1923	7,575,031
1916	7,696,344	1920	9,623,271	1924	6,850,000

Washington.

Washington has important coal fields which are conveniently located adjacent to the cities in the western part of the State and the tidewater facilities afforded by Puget Sound. Of the States on the Pacific Coast no other one compares with Washington as a coal producer, and while it has had to compete with the great coal fields of British Columbia there has been a steady output maintained even if no material growth is to be recorded.

The industry dates back to 1860 when there was an output of 5,374 tons. Not until 1876 did the output exceed 100,000 tons, but in 1884 it had reached 1,215,750 and passed the 2,000,000 mark in 1899. Since then the output has generally been in excess of 3,000,000 tons, but it has never exceeded 4,056,000.

The tonnage of the State of Washington has been as follows:

Year	Tons	Year	Tons	Year	Tons
1913	3,831,647	1917	4,002,759	1921	2,428,722
1914	3,040,361	1918	4,082,212	1922	2,581,165
1915	2,409,331	1919	2,990,447	1923	2,926,392
1916	3,019,600	1920	3,753,093	1924	2,400,000

Oregon.

Oregon is one of the smallest coal producing States, probably the least important of those in which mining is conducted on a regular commercial basis.

There is a record of an output of 43,205 tons as far back as 1880, but a production of 100,000 tons was not attained until 1896, and since then the tendency has been downward more often than upward, so that the output is now less than it was 40 years ago, being only about 30,000 tons a year.

The mines are in the vicinity of Coos Bay from which, at one time, shipments to San Francisco could be made to good advantage. Development of oil in California, however, practically put a quietus on the coal industry.

Headquarters of Pennsylvania Mine Inspectors.

In connection with the district tonnages of Pennsylvania, it might be well to state the places at which the mine inspectors make their headquarters, as this will give an idea as to the location of the various districts.

Joseph Walsh, Chief Department of Mines, Harrisburg.

Anthracite: 1st, Forest City; 2d, Carbondale; 3d, 4th, 5th and 6th, Scranton; 7th, Taylor; 8th, Pittston; 9th, West Pittston; 10th and 11th, Kingston; 12th and 13th, Wilkes-Barre; 14th, Nanticoke; 15th and 16th, Hazleton; 17th, Lansford; 18th, Coaldale; 19th, Pottsville; 20th, Mahanoy City; 21st, Shenandoah; 22d, Centralia; 23d, Mount Carmel; 24th, Shamokin; 25th, Lykens.

Bituminous: 1st, Monongahela; 2d, Latrobe; 3d, Mercer; 4th, Du Bois; 5th, Uniontown; 6th, Johnstown; 7th, Crafton; 8th, Philipsburg; 9th, Connellsville; 10th, Altoona; 11th, Greensburg; 12th, Punxsutawney; 13th, Johnstown; 14th, Freeport; 15th, Patton; 16th, Brownsville; 17th, Pittsburgh; 18th, Tyrone; 19th, Irwin; 20th, Somerset; 21st, Charleroi; 22d, Dravosburg; 23d, Masontown; 24th, Johnstown; 25th, Indiana; 26th, Bridgeville; 27th, Belle Vernon; 28th, Punxsutawney; 29th, Pittsburgh; 30th, Johnstown.

PENNSYLVANIA BITUMINOUS

Area Covered, Progress Made and Present Achievement.

The bituminous coal fields of Pennsylvania are in the western part of the State covering practically all of the area beyond Center County, which is in the precise center of Pennsylvania. The districts are numerous. Commencing with the outlying Blossburg district in Tioga County, they may be enumerated as follows:

Blossburg	Allegheny River	Johnstown	Latrobe
Snowshoe	Indiana	Southfork-Windber	Greensburg
Clearfield	Two Lick	Quemahoning	Youghiogheny
Reynoldsville	Cambria	Broadtop	Connellsville
Low Grade Division	Shawmut	Meyersdale	Pittsburgh

The tonnage of coal from these fields exceeds the output of any other State in the Union. Quite aside from the anthracite tonnage, the bituminous tonnage in Pennsylvania puts the State in the first rank. The coal includes all classifications and all requirements of gas making, steam raising, coke making, smithing purposes, etc., can be met. There is even a small amount of cannel coal produced in one section. While not so prominent in the public eye as is the anthracite industry the bituminous industry is most important and adds greatly to, if indeed it does not actually create, the industrial pre-eminence of the Keystone State.

The first authentic records of bituminous coal production in Pennsylvania covering the State in its entirety dates from 1840, when the amount produced was 464,826 tons. In view of this large tonnage it is probable that production had been carried on for a considerable length of time prior to that date.

The growth of the industry was relatively slow. Production did not reach a million tons until 1850, when the anthracite business was four times as great and did not reach two million tons until 1857, when the anthracite was still four times as great. It reached 4,000,000 tons, however, in 1862, when the anthracite business was less than 10,000,000 tons and in 1870 was 7,798,518 tons, just about half of the anthracite tonnage. In 1880 the bituminous tonnage was 18,425,163 tons, considerably more than half of the anthracite business, and in 1890 it was 42,302,173 tons, or only 10 per cent less than the anthracite tonnage. In 1900 it amounted to 79,842,326 tons, which put it far in the lead of the anthracite business, and since then the growth has been great, anthracite becoming a minor factor in the coal trade of Pennsylvania.

The soft coal trade has had periods of great depression, but the growth of the tonnage has been most remarkable and has played a wonderful part in the upbuilding of the country.

On the following pages we show details of production by companies operating in the various mine inspection districts which now aggregate no less than 30 in number, all mines employing ten men or more being under inspection by the Department of Mines.

Pennsylvania Bituminous Production by Districts.

District	1922	1923	1924	District	1922	1923	1924
I ...	3,700,770	7,700,367	5,844,562	XVI ..	3,999,064	8,788,081	3,999,064
II ...	5,395,115	5,327,080	3,180,948	XVII ..	2,174,260	4,562,664	4,101,640
III ..	3,023,294	3,135,341	2,162,544	XVIII .	2,174,260	2,930,593	1,939,002
IV ..	3,157,845	4,596,574	3,510,345	XIX ..	4,965,408	6,288,698	5,475,239
V ...	4,203,256	6,790,923	5,064,310	XX ...	4,230,424	4,092,436	3,616,681
VI ..	3,784,940	5,798,007	5,020,651	XXI ...	4,582,812	8,838,299	7,256,081
VII .	3,187,738	5,133,691	.....	XXII .	2,560,673	5,452,571	3,372,044
VIII	2,338,292	2,946,197	2,073,036	XXIII .	5,231,755	8,586,800	7,260,506
IX ..	4,009,419	4,582,226	2,983,500	XXIV .	3,700,193	5,352,518	5,345,883
X ...	1,941,280	3,230,590	2,676,320	XXV .	3,746,690	5,431,495	3,765,245
XI ..	5,078,217	6,456,795	4,547,513	XXVI .	3,049,969	6,257,826	4,239,771
XII .	3,410,134	5,251,424	3,298,326	XXVII.	3,004,317	6,980,360	5,651,737
XIII	2,824,385	4,585,543	3,846,465	XXVIII	3,596,653	5,504,069	5,128,067
XIV .	2,941,951	4,350,642	2,636,095	XXIX..	5,574,086	10,707,940	7,174,556
XV .	2,792,187	4,644,213	4,187,678	XXX .	4,133,413	4,753,803	3,531,111
				Total ..	118,141,579	167,026,766	122,888,920

FIRST

Company	Address	1922	1923	1924
Bethlehem Mines Corp.....	Bethlehem	903,965	2,949,911	1,805,356
Pittsburgh Coal Co.....	Pittsburgh	722,919	1,458,168	1,304,751
Valley Camp Coal Co.....	Cleveland, O.....	380,024	724,440	564,992
Yough. & Ohio Coal Co.....	Cleveland, O.....	265,438	575,143	528,250
Warner-Yough. Coal Co.....	Fayette City	103,933	259,835	201,464
Acme C. & C. Co.....	Rimersburg	222,676	186,112	77,104
South Fayette Coal Co.....	Bridgeville	44,547	88,440	93,902
Eclipse Gas Coal Co.....	Pittsburgh	110,000	145,077	98,387
National Mfg. Co.....	Pittsburgh	250,157	659,219	763,903
Ontario Gas Coal Co.....	Pittsburgh	120,480	297,178	261,383
Hillman C. & C. Co.....	Pittsburgh	27,206	189,381	125,445
Henderson Coal Co.....	Pittsburgh	18,314	65,584	*
Smaller operators		.....	.....	19,625
Total		3,700,770	7,700,367	5,844,562

*Idle.

SECOND

Keystone C. & C. Co.....	Greensburg	1,353,979	1,491,890	1,119,265
H. C. Frick Coal Co.....	Scottdale	386,200	307,535	91,150
Hostetter-Connells Coke Co...	Scottdale	615,795	714,714	386,705
The Chenango Furnace Co....	Wilpen	218,219	388,727	80,831
Latrobe-Connells. C. & C. Co..	Greensburg	248,168	87,652	50,187
New Alexandria Coke Co...	Greensburg	119,631	48,495	22,138
Ramsey Coal Co., Inc.....	Ligonier	106,374	108,687	75,352
Westmore-Connells. C. & C. Co.	Ligonier	137,295	95,518	103,679
Ligonier Diamond C. & C. Co..	Ligonier	85,735	66,470	106,360
Saxman C. & C. Co.....	Latrobe	76,489	73,568	69,653
Greens.-Connells. C. & C. Co..	Ligonier	119,657	80,863	31,723
Atlantic Crushed Coke Co.....	Greensburg	71,560	128,393	139,204
Mt. Pleasant By-Pro. Coal Co.	Greensburg	108,362	198,590	56,617

Company	Address	1922	1923	1924
Seger Bros. Coal Co.	Millwood	119,470	187,373	120,125
Oakville C. & C. Co.	Latrobe	85,237	92,708	99,772
Ridge Coal Co.	Latrobe	205,191	226,018	157,953
Westmoreland Mining Co.	Blairsville	321,496	260,041	164,554
Barnett Bros. Coal Co.	Latrobe	122,566	134,288	103,162
Mt. Pleasant Coke Co.	Greensburg	151,533	116,365	.....
Bradenville C. & C. Co.	Blairsville	48,338	90,926	25,994
Railway Steel Spring Co.	Latrobe	22,450	37,497	29,674
Vogele Coal Co.	Ligonier	51,380	16,757	49,312
St. Clair Coal Co.	Ligonier	32,560	29,375	32,977
Smaller operators		.....	.....	64,561
Total		5,395,115	5,327,080	3,180,948

THIRD

Allegheny Riv. Mining Co.	Kittanning	232,643	185,710	251,126
Mercer I. & C. Co.	Stoneboro	147,908	179,330	77,456
Sharon C. & L. Co.	Mercer	242,634	306,766	325,818
Erie CM. Co.	Butler	181,154	193,318	125,319
Mohawk Mining Co.	Kittanning	88,650	149,799	106,660
Samuel Sherwin	Karns City	92,237	80,599	66,546
Bruin Coal Co.	Bruin	55,400	99,514	66,054
Zenith Coal Co.	Butler	83,695	93,632	64,304
Crescent Port. Cement Co.	Wampum	80,648	87,485	28,740
Pennsy Gas Coal Co.	Franklin	57,199	47,294	38,482
Consolidated C. & C. Co.	Butler	124,962	81,874	21,828
North East CM. Co.	Pittsburgh	100,600	53,667	25,914
Mizener Coal Co.	Erie	32,626	34,718	53,719
Annandale Coal Co.	Smithport	56,177	53,941	47,270
MacDonald Coal Co.	Pittsburgh	55,500	118,221	113,589
Euclid Gas Coal Co.	Pittsburgh	53,236	47,134	24,169
F. P. Filer & Co.	Mercer	48,152	40,088	92,909
Butler CM. Co.	Butler	39,149	41,680	29,458
Victoria Coal Co.	Pittsburgh	38,583	40,987	25,839
Hallston Coal Co.	Butler	.....	88,329	66,984
James CM. Co.	Franklin	60,121	60,847	25,300
Cosco Gas Coal Co.	Butler	.....	42,695	47,243
North Butler CM. Co.	Butler	23,779	40,347	42,256
Haney Coal Co.	Clearfield	24,268	33,313	39,384
Crum Bros. Coal Co.	DuBois	.....	8,859	32,999
De Wolf Holben Coal Co.		.....	16,088	30,725
Fenelton Coal Co.		.....	13,107	33,244
Marwood Coal Co.	Coraopolis	.....	.....	26,941
Pentrooh Coal Co.	Smithport	.....	6,381	33,409
Vogeley Coal Co.	Butler	.....	11,443	44,563
Briar Hill Coal Co.	Butler	.....	10,125	23,154
Filer & Jenkins	Mercer	.....	12,697	22,333
Smaller operators		.....	.....	107,799
Total		3,023,294	3,135,341	2,162,544

FOURTH

Company	Address	1922	1923	1924
Northwestern M. & Ex. Co.	DuBois	548,836	959,035	970,319
Buffalo & Susq., C. & C. Co.	DuBois	350,812	625,480	449,711
Shawmut Mining Co.	St. Marys	192,628	331,505	393,695
Kettle Creek C. M. Co.	Bitumen	49,210	165,691	169,651
Cascade C. & C. Co.	Buffalo, N. Y.	60,645	221,198	76,259
Peale, Peacock & Kerr	New York	119,361	228,179	134,369
Panther Run Coal Co.	Ridgway	66,415	141,108	89,845
Bald Hill Coal Co.	St. Benedict	46,183	103,938	43,012
Jefferson Coal Co.	Coal Glen	53,557	100,971	100,559
Toby C. M. Co.	Brockwayville	47,538	98,655	58,898
Carnwarth Coal Co.	Winburne	33,964	46,089	43,651
A. B. Lansberry	Woodland	59,753	56,328	31,273
Woolridge Coal Co.	Woodland	52,000	32,093	28,402
Maple Run Coal Co.	Olanta	46,458	93,168	36,332
Burns Bros.	Houtzdale	19,329	80,085	26,082
Beadle & McCauley C. Co.	Brockwayville	7,507	52,900	43,323
Cassidy Coal Co.	Curwensville	21,369	44,826	36,664
Wiley Coal Co.	Curwensville	22,410	42,758	60,847
Crescent Refrac. Co.	Curwensville	15,834	30,822	25,793
Good Clay & Coal Co.	Patton	31,418	27,159	50,413
Blanchard Mosh. Mg. Co.	Pittsburgh	.....	29,000	85,670
Moose Creek Coal Co.	Clearfield	33,400	23,308	28,841
Goshen Coal Co.	Clearfield	48,000	15,892	27,034
Gonzales C. M. Co., Inc.	Clarence	15,640	26,305	27,029
Smaller operators		.....	.....	472,703
Total		3,057,845	4,596,574	3,510,345

FIFTH

H. C. Frick Coke Co.	Scottdale	2,069,863	4,223,392	2,527,407
W. J. Rainey, Inc.	Uniontown	338,477	810,988	946,066
Oliver & Snyder Steel Co.	Uniontown	61,682	333,973	275,413
Hecla C. & C. Co.	Pittsburgh	77,356	107,959	107,189
Locust Hill Coal Co.	Point Marion	139,835	124,552	166,481
Evans C. & C. Co.	Uniontown	52,126	43,749	*
R. B. Hays Coal Co.	Rockwood	51,070	78,011	143,084
Harah C. & C. Co.	Smithfield	54,788	46,400	36,884
W. J. Reilly C. & C. Co.	Uniontown	117,209	68,811	64,987
Fancy Hill Coal Co.	Cheat Haven	177,670	209,021	143,395
Davidson Conn'lls C. & C. Co.	Connellsville	73,900	68,880	43,838
South Union Coal Co.	Uniontown	.....	134,689	283,022
Irwin Gas Coal Co.	Greensburg	.....	111,556	22,930
Stern C. & C. Co.	Uniontown	24,150	63,519	20,644
Hankins Coal Co.	Philipsburg	37,389	9,847	50,443
Point Marion Coal Co.	Uniontown	46,986	25,200	48,848
Republic C. & C. Co.	Connellsville	70,525	11,452	38,287
Westm. Fayette C. & C. Co.	Greensburg	23,213	22,564	31,650
Southern Conn. Coke Co.	Connellsville	32,407	15,093	26,182

*Idle.

Company	Address	1922	1923	1924
Donald C. & C. Co	Connellsville	15,702	4,368	23,800
Small operators				63,760
Total		4,203,256	6,790,923	5,064,310

SIXTH

Bethlehem Mines Corp.	Bethlehem	1,357,371	2,101,272	1,715,117
Logan Coal Co	Beaverdale	525,684	933,666	604,977
Maryland Coal Co. of Penn.	St. Michaels	192,329	363,913	360,363
Beaver Run Coal Co	Beaverdale	67,858	87,978	*
Stineman C. & C. Co	South Fork	85,691	126,496	91,122
Stineman CM. Co	South Fork	66,402	103,260	131,550
Henriette CM. Co	Dunlo	72,100	110,252	100,465
Telford Coal Co	Johnstown	118,558	97,250	143,887
Mountain Coal Co	Galitzin	51,131	71,226	68,057
Riverside CM. Co	South Fork	87,860	98,845	75,004
Boucher-Cortright Coal Co	Beaverdale	49,984	98,572	195,100
Loyal Hanna C. & C. Co	Onalinda	40,952	55,401	91,579
Penelec Coal Co	Johnstown	40,356	58,409	35,035
Forks CM. Co	South Fork	39,232	48,608	21,912
Jasahill Coal Co	Johnstown	93,185	115,390	148,856
Victor Coal Mining Co	Somerset	68,213	123,115	182,929
Maple Ridge Coal Co	New York	54,999	98,988	167,697
Smokeless Coal Co	Johnstown	98,986	110,527	92,609
Cambria Fuel Co	Beaverdale	74,786	79,116	121,111
Bird Coal Co	Johnstown	168,491	208,661	221,625
Mineral Point Coal Co	Johnstown	46,925	48,837	31,096
Huber Street Coal Co	Johnstown	31,989	40,801	21,721
H. C. Stineman	South Fork	30,681	44,564	22,268
South Fork Bit. Coal Co	South Fork	20,234	56,471	34,732
East Windber Coal Co	Windber	23,076	50,282	65,034
Lochrie Coal Co	Windber		37,152	37,121
Cosgrove-Meehan C. Co.†	Johnstown	71,165	100,289	108,439
Smaller operators				131,245
Total		3,784,940	5,798,007	5,020,651

†Formerly Grazier C. M. Co. *Idle.

SEVENTH

(*See Supplement*)

EIGHTH

Company	Address	1922	1923	1924
Lehigh Valley Coal Co	Snow Shoe	231,042	331,682	227,936
Morris Run Coal Co	Morris Run	112,210	137,126	90,588
Clearfield Bit. Coal Corp.	Indiana	204,287	309,635	323,841
Pennsylvania C. & C. Corp.	Cresson	98,009	114,093	171,315
Peale, Peacock & Kerr	St. Benedict	147,664	203,361	235,788
Moshannon C. M. Co	Osceola Mills	117,482	117,198	79,560
Morrisdale Coal Co	Morrisdale	57,362	224,367	57,735
Blossburg Coal Co	Arnot	116,742	198,885	82,567

Fall Brook Coal Co.	Antrim	61,421	61,834	55,742
Cunard Coal Co.	Morrisdale	123,033	138,888	172,370
Penelec Coal Co.	Philipsburg	46,093	62,497	47,493
Roden C. M. Co.	Philipsburg	35,703	137,928	33,500
Moravian Coal Co.	Snow Shoe	52,250	68,010	36,000
Ashman Coal Co.	Philipsburg	28,174	60,840	46,869
Guion Coal Co.	Philipsburg	13,366	20,000	27,567
Harris Bros. Coal Co.	Philipsburg	.....	.....	25,672
Maryland C. & C. Co.	Philipsburg	13,213	20,520	25,149
Brighton C. M. Co.	Philipsburg	8,922	2,417	21,787
Kato Coal Co.	Kato	28,917	30,948	26,936
Midland Penna. Coal Corp.	Madera	.....	.....	30,699
Smaller operators		.....	.....	253,931
Total		2,338,292	2,946,197	2,073,036

NINTH

H. C. Frick Coke Co.	Scottdale	2,404,187	3,466,419	1,884,400
W. J. Rainey, Inc.	Uniontown	174,866	252,825	236,464
Indian Creek C. & C. Co.	Somerset	139,357	98,408	88,554
Sagamore Coal Co.	Pittsburgh	56,643	40,339	71,627
American Mang. Mfg. Co.	Dunbar	74,348	101,173	*
Brownfield C. & C. Co.	Uniontown	58,097	35,832	27,515
Melcroft Coal Co.	Pittsburgh	182,448	164,658	211,365
Vanderbilt C. & C. Co.	Connellsville	138,119	49,686	*
Romney Coal Co.	Pittsburgh	34,152	31,055	56,197
Nellie C. & C. Co.	Connellsville	.....	38,304	154,556
Mahoning C. & C. Co.	Connellsville	38,883	12,784	38,632
Howard Coal Co.	Indian Head	46,393	29,756	24,601
Red Top Coal Co.	Washington, D. C.	.....	.....	24,217
Solar Smokeless C. Co.	West Newton	.....	.....	21,056
Corrado Coal Co.	Connellsville	34,701	26,827	20,839
Smaller operators		.....	.....	123,477
Total		4,000,419	4,582,226	2,983,500

*Idle.

TENTH

Pennsylvania C. & C. Co.	Cresson	141,720	338,879	348,284
Sonman Shaft Coal Co.	Sonman	396,783	527,883	612,479
Shoemaker CM. Co.	Philadelphia	170,742	257,001	292,868
C. A. Hughes & Co.	Altoona	145,594	194,498	179,906
Portage CM. Co.	St. Benedict	120,318	221,172	155,941
Forge CM. Co.	Philadelphia	89,015	111,581	121,178
Miller Coal Co.	Portage	65,629	91,371	55,575
Beachley Coal Co.	Johnstown	96,654	160,423	145,369
Taylor & McCoy C. & C. Co.	Baltimore, Md.	76,475	122,158	63,567
W. H. Piper & Co.	Philadelphia	43,573	83,476	68,964
Russet Coal Co.	Altoona	53,894	84,269	80,626
Lilly Coal Co.	Altoona	57,242	84,020	53,938
Sonman Run Coal Co.	Philadelphia	45,942	68,476	49,704
Forks Coal Co.	Altoona	36,365	66,395	49,284
Trout Run CM. Co.	St. Benedict	22,877	63,777	*

Company	Address	1922	1923	1924
Glen White C. & S. Co.	Baltimore, Md.	25,279	46,223	32,795
Geo. Pearce & Sons	Johnstown	12,766	44,394	36,587
Thermal Smok. Coal Co.	Johnstown	5,869	39,146	*
Argyle Coal Co.	Greensburg	62,962	142,271	124,831
Smaller operators		.....	.....	204,424
Total		1,941,280	3,230,593	2,676,320

*Idle.

ELEVENTH

H. C. Frick Coke Co.	Scottdale	1,786,664	2,371,188	1,265,163
Keystone C. & C. Co.	Greensburg	933,898	877,978	761,974
Greensburg C. & C. Co.	Greensburg	309,146	312,205	295,650
Westmoreland Coal Co.	Irwin	254,205	347,490	249,220
Jamison C. & C. Co.	Greensburg	295,530	453,316	500,112
Yough. & Ohio Coal Co.	Cleveland, O.	185,562	486,252	223,877
Wheyl Coke Co.	Uniontown	178,112	207,301	153,314
Humphreys C. & C. Co.	Scottdale	109,469	123,338	123,146
W. J. Rainey, Inc.	New York	188,608	455,069	562,090
Fulton C. & C. Co.	Youngwood	51,466	83,579	108,225
Penn Valley CM. Co.	Youngwood	62,241	161,631	163,064
Yukon Coal Co.	Johnstown	39,532	66,538	42,740
Smaller operators		.....	.....	98,928
Total		5,078,217	6,456,795	4,547,513

TWELFTH

Rochester & Pitts. C. & I. Co.	Rochester, N. Y.	625,376	891,894	373,970
Northwestern M. & Ex. Co.	DuBois	326,374	549,424	578,885
Jefferson & C'field C. & I. Co.	Punxsutawney	183,837	437,249	136,033
Clearfield Bit. Coal Corp.	Clearfield	418,809	694,442	634,519
Cascade C. & C. Co.	Sykesville	192,564	397,852	261,564
Onondaga C. M. Co.	Buffalo, N. Y.	77,947	169,163	39,913
Pennsylvania C. & C. Corp.	New York	43,238	125,341	33,683
Punxsutawney C. M. Co.	Punxsutawney	62,101	109,841	29,037
Banks Coal Co.	St. Benedict	87,494	46,713	28,138
Pansy Coal Co.	Punxsutawney	113,341	62,541	50,778
Ellsworth-Dunham Coal Co.	St. Benedict	80,413	130,684	20,850
Superior Coal Co.	Glen Campbell	49,233	159,500	46,748
McClure & Tyson Coal Co.	Big Run	97,750	84,225	75,000
Trojan C. M. Co.	Clearfield	37,775	58,386	40,052
Bowersville C. M. Co.	Punxsutawney	49,409	82,788	37,032
S. A. Rinn Coal Co.	Punxsutawney	46,726	94,268	25,965
Light C. M. Co.	Punxsutawney	42,827	78,148	71,603
Cushake C. M. Co.	Burnside	33,861	37,710	20,229
Lindsey C. M. Co.	Punxsutawney	27,956	61,382	21,719
Perry Hill Coal Co.	Hamilton	21,975	44,082	54,798
Ira S. Smith	Reynoldsville	16,724	30,042	33,806
Punxsutawney C. & C. Co.	Indiana	.....	.....	113,287
McClure Mng. Co.	Duquesne	19,783	25,234	36,220
Mt. Airie C. M. Co.	Syracuse, N. Y.	16,548	23,079	35,058
Roberta Coal Co.	Johnstown	42,300	25,379	31,296

Company	Address	1922	1923	1924
Urey Ridge Coal Co.	Altoona	31,891	22,434	28,609
M. & N. Coal Co.	Curwensville	.....	.....	28,356
Mahaffey C. M. Co.	Patton	.....	.....	27,977
Smaller operators		.....	.....	172,935
Total		3,410,134	5,251,424	3,298,326

THIRTEENTH

Pennsylvania C. & C. Corp.	Cresson	512,172	389,551	480,188
Monroe CM. Co.	Colver	285,513	454,669	474,460
Springfield CM. Co.	St. Benedict	200,182	291,016	306,393
Lincoln CM. Co.	Nanty Glo	107,764	170,657	93,732
Imperial Coal Corp.	New York	131,022	244,480	346,166
Conemaugh CM. Co.	Johnstown	101,525	175,950	158,586
Irvona C. & C. Co.	Rosebud	128,271	220,456	202,654
Betz CM. Co.	Philadelphia	41,792	87,510	66,836
Fallen Timber Coal Co.	Fallen Timber	42,326	67,056	21,344
Argyle CM. Co.	Greensburg	66,831	104,939	34,845
Thomson-Lea CM. Co.	La Jose	80,475	51,640	80,612
Heisley Coal Co.	Philadelphia	215,029	526,484	311,538
Altoona C. & C. Co.	Altoona	59,967	43,832	*
Webster C. & C. Co.	Cresson	.....	250,561	247,793
Imperial Cardiff Coal Co.	Johnstown	29,579	208,445	246,509
S. J. Mountz & Co.	Smith Mills	20,923	80,276	53,342
Dexcar CM. Co.	New York	18,824	69,032	*
S. Hegarty's Sons	Coalport	14,636	47,751	36,372
Jasahill CM. Co.	Johnstown	6,603	40,142	105,489
Moshannon Smith C. Co.	Clearfield	21,054	36,873	50,095
Victor Collieries Co.	Coalport	.....	30,100	62,004
Middle Penna. Coal Co.	Madera	181,200	246,313	193,072
Leland Coal Co.	New York	24,531	29,387	41,373
Priscilla CM. Co.	Altoona	4,883	22,609	24,689
Lena Coal Co.	Winburne	15,608	19,803	20,989
Small operators		.....	.....	181,384
Total		2,824,385	4,585,543	3,846,465

*Idle.

FOURTEENTH

Saltsburg Coal Mining Co.	Avonmore	137,058	278,113	175,935
Crucible Fuel Co.	Crucible	124,432	277,646	89,530
Pittsburgh Plate Glass Co.	Creighton	168,726	269,733	269,869
McFetridge Bros. Coal Co.	Creighton	122,214	105,368	61,466
Pennsylvania Salt Mfg. Co.	Matrona	178,061	178,914	133,465
Pine Run Coal Co.	Leechburg	154,562	204,937	200,755
Cochran Coal Co.	Salina	175,037	238,571	124,635
Allegheny C. & C. Co.	Kittanning	104,100	117,700	102,131
Avonmore C. & C. Co.	Leechburg	34,459	149,451	83,360
Maher C. & C. Co.	Leechburg	31,563	61,054	45,856
Armstrong County Coal Co.	Leechburg	45,712	73,392	54,803
Park Coal Co.	Leechburg	95,438	101,654	71,897
Kiskimineitas Coal Co.	Blairsville	127,386	119,757	61,769

Company	Address	1922	1923	1924
Kerr Coal Co	Freeport	45,427	146,500	62,380
Paulton Coal Mining Co	Leechburg	59,818	92,191	45,223
Conemaugh Coal Co	Saltsburg	73,069	60,520	.....
Ben Franklin Coal Co	Vandergrift	90,107	213,070	125,207
Gladys Coal Co	Leechburg	71,358	81,184	60,516
Kiski Valley Coal Co	New Bethlehem	40,918	98,400	71,823
Saltsburg Colliery Co	Leechburg	123,913	228,296	154,768
Apollo Coal Co	Leechburg	56,335	84,936	42,985
Butler Junction Coal Co	Leechburg	44,728	92,605	79,361
Amer. Sheet & Fin. Plate Co.	Pittsburgh	39,525	41,345	23,109
Aladdin C. & C. Co	Leechburg	37,283	98,191	49,756
Clark Coal Co	Connellsville	32,612	41,581	22,338
Conemaugh-Kiski Coal Co	Latrobe	22,941	108,908	56,067
West Leechb'g Sh. & T. P. Co.	Leechburg	.....	50,467	53,256
Kepple CM. Co	Leechburg	20,416	42,554	23,970
Haas Coal Co	Matrona	18,632	21,262	22,560
Orpha Coal Co	Kittanning	3,016	25,373	24,427
Valley Coal Co	Leechburg	4,472	25,679	22,446
West Varentum Coal Co.	Freeport	26,351	23,946	26,924
Smaller operators		.....	.....	223,508
Total		2,941,951	4,350,642	2,636,095

FIFTEENTH

Pennsylvania C. & C. Corp.	New York	458,047	1,047,096	965,437
Barnes & Tucker Co	Barnesboro	556,110	741,055	672,676
Sterling Coal Co	Elmora	176,164	185,448	150,234
Carrolltown Coal Co	St. Benedict	82,217	235,426	295,780
Rich Hill Coal Co	Hastings	143,823	193,478	383,650
Cherry Tree Coal Co	St. Benedict	180,164	293,044	336,541
Madeira, Hill CM. Co	Philipsburg	128,832	188,446	172,758
Duncan Spangler Coal Co	Philadelphia	84,929	103,531	56,775
Empire CM. Co	Clearfield	81,409	194,413	150,559
Clearfield Bit. Coal Corp	Clearfield	126,271	51,166	*
Jos. H. Reilly Coal Co	Philadelphia	45,638	63,966	59,002
Cymbria Coal Co	Altoona	81,409	113,978	66,767
Hastings C. & C. Co	Cherry Tree	41,034	104,321	34,989
Hastings Fuel Co	Hastings	49,257	112,988	42,750
Barnes Coal Co	Barnesboro	.....	284,889	302,747
Marion Centre CM. Co	Philadelphia	18,865	115,897	107,899
Huether Coal Co	Hastings	12,934	90,454	109,493
Lenox Coal Co	Hastings	13,312	49,713	*
Binder CM. Co	Carrolltown	29,653	48,458	33,217
Miller Run CM. Co	Patton	18,607	27,257	42,345
Pine Valley Coal Co	Hastings	7,432	20,835	27,822
Red Top Coal Co	Houtzdale	21,794	16,549	23,378
Smaller operators		.....	.....	152,759
Total		2,792,187	4,644,213	4,187,678

*Idle.

SIXTEENTH

Company	Address	1922	1923	1924
H. C. Frick Coke Co.	Scottdale	1,493,328	3,348,137	2,779,423
W. J. Rainey, Inc.	Uniontown	277,997	834,578	1,057,244
Monessen C. & C. Co.*	Pittsburgh	208,321	481,174	439,750
Hecla C. & C. Co.	Pittsburgh	296,957	340,273	530,039
Redstone C. & C. Co.	Pittsburgh	208,960	383,236	338,931
Orient C. & C. Co.‡	Pittsburgh	167,430	196,456	104,638
Connellsville Central Coke Co.	Pittsburgh	151,550	309,070	187,602
Republic I. & S. Co.	Republic	174,902	426,841	200,392
Thompson Connells. Coke Co.	Republic	142,485	397,192	437,945
Tower Hill Connells. Coke Co.	Uniontown	169,997	372,634	178,996
Eastern Coke Co.	Pittsburgh	153,574	378,403	450,701
Bourne-Fuller Coke Co.	Cleveland, O.	123,016	297,186	270,614
Superior Connells. Coal Co.	Lockvale	52,472	74,582	27,094
South Fayette Coal Co.	Pittsburgh	97,120	131,581	136,050
Etna Connells. Coke Co.	Connellsville	34,198	64,955	**
Buckeye Coal Co.†	Brier Hill	176,094	177,239	239,363
Smaller operators		.....	.....	50,719
Total		3,999,064	8,788,081	7,429,510

* Formerly Pittsburgh Steel Co. † Formerly Brier Hill Coke Co.
‡ Formerly American Coke Corp.
** Idle.

SEVENTEENTH

Pittsburgh Ter. Coal Co.	Pittsburgh	852,232	2,244,470	542,745
Pittsburgh Coal Co.	Pittsburgh	416,370	1,115,637	2,527,135
Chartiers Creek Coal Co.	Pittsburgh	162,989	289,273	291,499
Lindley Coal Co.	Pittsburgh	60,982	154,637	214,444
Union Valley Coal Co.	Pittsburgh	77,400	112,871	23,891
Peters Creek Gas Coal Co.	Pittsburgh	20,152	77,176	45,512
Walters Coal Co.	Middletown	23,418	30,000	21,650
Bertha-Consumers Co.	Pittsburgh	118,462	220,882	247,919
South Hills Coal Co.		.....	.....	25,130
Smaller operators		.....	.....	161,715
Total		2,174,260	4,562,664	4,101,640

EIGHTEENTH

Rockhill C. & I. Co.	Robertsdale	235,629	553,194	717,743
Berwind-White CM. Co.	Houtzdale	107,099	209,829	135,470
Jas. M. McIntyre & Co.	Six Mile Run	86,389	38,902	41,985
Colonial Iron Co.	Riddlesburg	45,428	121,746	34,369
Grampian CM. Co.	Clearfield	115,413	199,456	76,190
Langdon Coal Co.	Huntington	38,111	50,997	28,610
Hale Coal Co.	Philipsburg	91,660	168,499	160,612
Shannon Co.	Dudley	59,937	105,006	68,869
Du Shan CM. Co.	Osceola Mills	38,942	50,708	33,444
Penn Central Power Co.	Altoona	.....	48,374	56,670
Red Top CM. Co.	Houtzdale	28,917	54,093	45,995
Bessemer Coal Co.	Brisbin	12,604	21,433	28,898

Company	Address	1922	1923	1924
Burtuci CM. Co.	Osceola Mills	.....	22,385	20,920
Dahlin Bros. CM. Co.	Houtzdale	17,408	19,318	28,911
Standard Wash. C. Co.	Clearfield	16,674	29,388	20,848
Stine CM. Co.	Osceola Mills	83,819	.....	53,100
Smaller operators		.....	.....	386,366
Total		1,903,039	2,930,593	1,939,002
NINETEENTH				
Westmoreland Coal Co.	Irwin	1,683,052	2,267,178	1,578,319
Ocean Coal Co.	Heominie	582,025	710,588	535,770
Bethlehem Mines Corp.	Bethlehem	634,108	781,653	914,234
Keystone C. & C. Co.	Greensburg	303,449	262,878	289,295
Pittsburgh Coal Co.	Pittsburgh	387,305	712,134	559,860
Irwin Gas Coal Co.	Greensburg	319,644	391,179	480,502
Hillman C. & C. Co.	Pittsburgh	377,575	359,277	450,528
Delmont Gas Coal Co.	Delmont	186,637	139,600	98,733
Howard Gas Coal Co.	Greensburg	97,970	157,228	255,180
W. B. Skelly Coal Co.	Export	45,742	59,808	67,009
Seehart Coal Co.	Saltsburgh	34,074	73,996	51,900
Edw. Tomajko	Adamsburg	24,192	80,000	131,146
Claridge Coal Co.	Greensburg	.....	63,893	38,400
Small operators		.....	.....	24,363
Total		4,965,408	6,288,698	5,475,239
TWENTIETH				
Consolidation Coal Co.	New York	977,814	1,119,674	873,685
Hillman C. & C. Co.	Pittsburgh	385,673	441,208	470,183
Quemahoning Coal Co.	Somerset	418,459	395,610	341,408
Brothers Valley Coal Co.	Macdonaldton	145,062	170,868	173,347
Penn Smokeless Coal Co.	Pittsburgh	99,740	106,471	116,405
Davis C. & C. Co.	Baltimore, Md.	166,181	160,725	183,863
Quemahoning Creek Coal Co.	Somerset	122,330	114,830	83,625
Listie Quemahoning Coal Co.	New York	85,544	54,982	60,319
Pine Hill Fuel Co.	Meyersdale	65,981	71,155	77,779
Listie Coal Co.	Somerset	78,090	57,221	47,046
Hillworth Coal Co.	Acosta	44,149	57,284	52,491
Berlin Coal Co.	Johnstown	51,810	38,078	64,603
Reading Iron Co.	Kimmelton	59,070	76,185	93,863
Atlantic Big Vein Coal Co.	Meyersdale	92,482	80,928	41,161
Shipley CM. Co.	Meyersdale	60,353	72,352	34,775
Berkey Bros. Coal Co.	Meyersdale	47,581	42,820	32,800
MacGregor Coal Co.	Somerset	41,637	34,144	29,391
Forge CM. Co.	Philadelphia	33,549	61,307	55,457
Enterprise Coal Co.	Garrett	30,538	52,166	56,214
Smokeless Quemah. Coal Co.	Somerset	30,463	41,751	37,996
Black Top Coal Co.	Washington	27,073	51,631	34,825
C. K. Bowman	Boynton	.....	40,722	44,770
Madeira Hill Smith. C. Co.	Philadelphia	8,801	20,984	64,467

Company	Address	1922	1923	1924
Quemahoning Valley C. Co.	Somerset	.....	21,772	41,750
Mountain Valley Coal Co.	Baltimore, Md.	.....	21,894	35,853
Royal Quem. Coal Co.	Greensburg	16,623	15,476	34,932
Penn. Smith Coal Co.	New York	25,728	26,941	31,569
Shade CM. Corp.	Johnstown	.....	13,732	30,000
Penelec Coal Corp.	Johnstown	34,652	27,615	26,125
Harding Coal Co.	Elk Lick	20,315	11,373	24,518
Randolph Coal Co.	Somerset	25,752	.....	21,183
Allen Coal Co.	Nanty Glo	14,343	9,770	20,850
Smaller operators		.....	.....	280,328
Total		4,230,424	4,092,436	3,616,681

TWENTY-FIRST

Vesta Coal Co.	California	2,058,058	4,272,161	3,430,650
Pittsburgh Coal Co.	Pittsburgh	428,070	1,284,783	976,690
Lilley C. & C. Co.	Charleroi	229,814	198,006	*
Reliance Coke & Fur. Co.	Denbo	304,711	339,522	499,894
Crucible Fuel Co.	Pittsburgh	271,340	630,426	624,524
Clyde C. & C. Co.	Pittsburgh	133,083	254,815	186,382
Diamond C. & C. Co.	Pittsburgh	74,819	180,009	†
Maple Glen Coal Works	Pittsburgh	67,471	141,089	30,019
Pickands, Mather & Co.	Cleveland, O.	415,562	703,600	717,391
Clarksville Gas Coal Co.	Pittsburgh	80,559	95,804	108,190
Champion Gas Coal Co.	Pittsburgh	30,683	57,630	49,170
H. C. Frick Coke Co.	Scottdale	131,547	218,212	199,645
Trumbull Coal Co.	Pittsburgh	118,137	161,615	179,616
Chartiers Southern C. Co.	Pittsburgh	39,649	118,502	167,564
W. H. Flint		.....	.....	27,689
Hillman C. & C. Co.	Pittsburgh	.....	.....	24,406
Smaller operators		.....	.....	34,251
Total		4,582,812	8,838,299	7,256,081

†Taken over by Hillman C. & C. Co.

TWENTY-SECOND

Pittsburgh Coal Co.	Pittsburgh	1,345,782	3,879,781	2,364,278
Hillman C. & C. Co.	Pittsburgh	147,678	480,837	388,386
Westmoreland Coal Co.	Irwin	193,799	221,390	177,787
State Road Coal Co.	McKeesport	40,652	72,066	31,203
Wineland-Gilmon C. & C. Co.	Uniontown	27,191	37,882	
McKeesport C. & C. Co.	McKeesport	.....	.....	53,156
Bowman Bros.	McKeesport	33,955	24,232	30,283
Farmer, Stentz & Molleston C. Co.	Versailles	10,959	27,186	26,524
T. H. & R. A. Taylor	East McKeesport	30,387	23,553	20,929
Smaller operators		.....	.....	179,498
Total		2,560,673	5,452,571	3,372,044

*Idle.

TWENTY-THIRD

Company	Address	1922	1923	1924
H. C. Frick Coke Co.	Scottdale	1,777,352	3,910,126	3,350,121
Hecla C. & C. Co.	Pittsburgh	145,430	435,868	358,370
Consolidated Coke Co.	Grays Landing	297,802	493,782	418,469
Republic I. & S. Co.	Uniontown	178,255	497,868	587,685
Puritan Coke Co.	McClellandtown	201,282	353,817	325,965
Poland Coal Co.	Pittsburgh	268,978	208,032	150,494
Reilly-Callaghan C. & C. Co.	Smithfield	160,024	105,341	81,632
Buckeye Coal Co.	Youngstown, O.	273,211	811,501	637,782
Monessen C. & C. Co.	Pittsburgh	204,888	237,131	194,073
West Point Marion Coal Wks.	Point Marion	60,155	69,801	100,679
Maple-Sterling Coal Works	Dunkard	122,533	88,740	125,178
Penn-Pitt C. & C. Co.	Point Marion	113,504	196,334	159,469
Fayette Coke Co.	New Salem	36,041	115,793	36,646
Nicholson Coal Co.	Uniontown	53,296	35,927	27,807
Greene Co. C. & C. Co.	Point Marion	50,922	57,993	62,624
Frederickstown C. & C. Co.	Fredericktown	120,149	191,655	66,764
Rosedale Coal Co.	Morgantown, W. Va.	47,257	40,233	43,617
Warwick Coal Co.	Indian Creek	75,312	43,629	139,257
Moffit-Sterling Gas C. Co.	Charleroi	52,492	73,474	103,432
Crawford Coal Co.	Homestead	47,844	40,690	90,313
Hope Coke Co.	Uniontown	.....	58,629	53,705
Mabel Coal Works	Dunkard	.....	40,346	38,048
Provins Coal Co.	Uniontown	.....	39,190	28,450
Smaller operators		.....	.....	79,925
Total		5,231,755	8,586,800	7,260,506

TWENTY-FOURTH

Berwind-White CM. Co.	Windber	1,353,610	2,684,942	2,458,030
Reitz Coal Co.	Windber	466,903	657,823	750,940
Arrow CM. Co.	Pittsburgh	89,396	145,961	123,754
Huskin CM. Co.	Windber	157,169	86,050	59,067
Valley Smokeless Coal Co.	Johnstown	124,477	125,407	100,692
Wilbur CM. Co.	Blairsville	178,595	301,996	497,670
Baker-Whiteley Coal Co.	Baltimore, Md.	111,828	114,857	171,999
Loyal Hanna C. & C. Co.	Cairnbrook	146,647	249,576	330,291
Sunnyside Coal Co.	Johnstown	129,742	100,196	105,124
Pennsylvania Collieries, Inc.	New York	49,596	83,651	23,766
Colonial Coal Co.	Johnstown	88,770	95,137	52,139
Shade CM. Co.	Johnstown	49,000	39,960	39,633
Lorain Steel Co.	Johnstown	62,625	59,344	69,878
Sheesley Coal Co.	Johnstown	53,115	38,410	23,246
Somerset-Windber Coal Co.	Windber	7,575	40,502	81,300
Ines Coal Co.	Windber	19,040	36,365	64,348
Lochrie-Price Coal Co.	Windber	20,642	33,287	20,632
Ebow CM. Co.	Pittsburgh	.....	.....	22,564
Imperial Coal Corp.	New York	60,996	86,050	98,830
Lehman & Estop Coal Co.	Windber	16,309	19,972	26,408

Company	Address	1922	1923	1924
Somerset Creek Fuel Co.	Hooversville	28,017	18,413	21,520
Windber Standard C. Co.	Johnstown	.....	29,389	78,648
Smaller operators		.....	.....	125,404
Total		3,700,193	5,352,519	5,345,883
TWENTY-FIFTH				
Bethlehem Mines Corp.	Bethlehem	758,470	680,017	528,971
Jefferson & Clearf. C. & I. Co.	Indiana	556,042	952,361	420,887
Pittsburgh Gas Coal Co.	Indiana	532,507	751,778	527,624
Russell CM. Co.	St. Benedict	260,531	400,764	505,732
Clearfield Bit. Coal Corp.	Clearfield	366,536	745,212	651,663
Coal Run Mining Co.	Indiana	227,031	307,137	242,663
Seneca CM. Co.	Buffalo	64,426	77,409	29,594
Empire CM. Co.	Philadelphia	65,090	174,261	29,834
Tide CM. Co.	Indiana	42,562	108,401	28,343
Penn C. & C. Corp.	Barnesboro	45,260	134,888	146,062
Roch. & Pitts. C. & I. Co.	Rochester	357,120	492,120	223,436
Savan. Collieries Co.	Indiana	57,802	44,889	31,630
Punxiana Coal Co.	Indiana	.....	.....	189,707
Gulf C. & C. Co.		.....	.....	83,346
Kenwood Coal Co.		.....	.....	28,614
Smaller operators		.....	.....	97,139
Total		3,746,690	5,431,495	3,765,245
TWENTY-SIXTH				
National Mining Co.	Morgan	619,935	1,185,637	1,254,399
Pittsburgh Coal Co.	Pittsburgh	151,618	466,029	*
Pittsburgh Terminal Coal Corp.	Pittsburgh	386,005	907,997	898,061
McClane Mining Co.	Washington	237,700	317,522	231,785
Yough. & Ohio Coal Co.	Cleveland, O.	187,308	492,322	47,611
Henderson Coal Co.	Canonsburg	99,340	280,956	*
Duquesne C. & C. Co.	Avella	196,338	402,143	421,240
Carnegie Coal Co.	Pittsburgh	56,556	181,121	116,534
Lincoln Gas Coal Co.	Pittsburgh	163,998	264,382	262,818
Pryor Coal Co.	Greensburg	32,350	46,293	*
Canonsburg Gas Coal Co.	Pittsburgh	70,152	103,030	85,306
Waverly C. & C. Co.	Pittsburgh	111,055	182,884	*
Export Coal Co.	Expedit	138,921	226,362	147,008
Country Club Coal Co.	Pittsburgh	35,498	113,004	97,122
Avella Coal Co.	Greensburg	111,270	201,632	194,496
Pitts. & Southwestern C. Co.	Avella	52,156	98,860	*
Washington Gas Coal Co.	Pittsburgh	125,882	251,454	275,478
Jefferson Gas Coal Co.	Pittsburgh	62,300	188,944	92,114
Oak Hill CM. Co.	Washington	21,000	56,000	*
Chartiers Gas Coal Co.	Pittsburgh	.....	.....	25,984
Smaller operators		.....	.....	89,365
Total		3,049,969	6,257,826	4,239,771

*Idle.

TWENTY-SEVENTH

Company	Address	1922	1923	1924
Pittsburgh Coal Co	Pittsburgh	475,199	1,218,751	741,821
Washington C. & C. Co	Dawson	495,304	1,126,975	622,255
H. C. Frick Coke Co	Scottdale	379,251	1,013,060	1,738,275
Diamond C. & C. Co	Pittsburgh	126,423	357,098	†
Pittsburgh & Erie Coal Co	Pittsburgh	48,799	267,264	157,828
Hillman C. & C. Co	Pittsburgh	87,788	342,322	456,815
Monessen C. & C. Co	Pittsburgh	129,745	200,661	135,379
Lowber Gas Coal Co	Lowber	205,880	441,526	62,625
Lincoln C. & C. Co	Waltersburg	119,700	221,054	140,506
W. J. Rainey, Inc	Uniontown	161,200	404,594	510,646
Jamison C. & C. Co	Greensburg	299,820	690,911	799,003
Chamouni Coal Co	Fayette City	51,483	65,781	73,125
Forsythe Coal Co	Pittsburgh	48,256	78,066	36,522
Century Coke Co	Brownsville	46,531	126,967	46,146
Snowden Coke Co	Pittsburgh	30,700	160,372	51,931
Atlas Coke Co	Pittsburgh	.....	61,723	37,978
Victoria Coal Co	Pittsburgh	.....	33,244	23,400
Smaller operators		.....	.....	16,582
Total		3,004,317	6,980,360	5,651,737

†Taken over by Hillman C. & C. Co.

TWENTY-EIGHTH

Buffalo & Susq. C. & C. Co	DuBois	413,083	833,500	717,883
Cowanshannock C & C. Co	Rochester, N. Y.	520,277	981,316	795,362
Allegheny River Mfg. Co	Kittanning	253,408	254,706	406,962
Pine Run Coal Co	New Bethlehem	84,606	84,376	20,372
Summit CM. Co	Punxsutawney	82,642	104,499	65,168
Keystone Mining Co	East Brady	72,627	311,059	392,794
Pawnee Coal Co	Kittanning	38,617	50,711	29,386
Red Bank Coal Co	Pittsburgh	119,024	135,871	133,187
Wallwork Mining Co	Summerville	36,383	142,484	46,345
Lumstead Mining Co	Echo	56,977	79,425	62,850
W. J. James Coal Co	Franklin	32,759	39,013	31,475
Summerville Coal Co	Brookville	40,000	48,000	45,000
Hamler Coal Co	Clarion	67,162	45,081	76,461
Eureka Coal Co	Strattonville	38,758	47,517	36,062
W. R. Calverley, Inc	Pittsburgh	.....	242,681	165,298
Gilbert Coal Co	Timblin	21,421	116,758	130,700
Clarion CM. Co	Philadelphia	18,736	65,054	28,732
Rose & McGregor C. Co	New Bethlehem	15,496	51,569	83,945
Church Hill Mfg. Co	Leechburg	29,172	49,055	.....
Kittanning Steam C. Co	Kittanning	12,301	47,817	23,641
Orchard Coal Co	Scottdale	11,000	37,970	41,100
H. O'Neill & Co	Lucinda	28,093	32,723	25,124
Columbia C. M. Co		.....	.....	27,094
Dora Coal Co	DuBois	19,317	27,002	48,956
Eagle Mining Corp.	Ridgway	10,152	16,500	21,240

Company	Address	1922	1923	1924
Helena Coal Co	Reynoldsville	8,540	27,326	23,176
Markle, Bullers & Co	Dora	14,075	26,976	63,021
McGregor Coal Co	Punxsutawney	25,000	29,160	25,732
Mercer I. & C. Co	Stoneboro	15,067	26,719	23,453
Ringgold Coal Co	Timblin	.....	20,940	32,140
Rhea Coal Co	Reidsburg	12,291	4,200	24,000
Rose Valley Coal Co	Clarion	14,182	18,864	22,020
St. Mary's Sewer Pipe Co	No. Point	16,912	21,903	28,000
Timblin Coal Co	Timblin	.....	14,457	22,782
Yates Coal Co		5,840	11,362	24,345
Smaller operators		.....	.....	.....
Total		3,596,653	5,504,069	5,128,067

TWENTY-NINTH

Ford Collieries Co	Pittsburgh	947,475	1,670,678	848,883
Pittsburgh Coal Co	Pittsburgh	650,886	1,341,265	1,085,307
Valley Camp Coal Co	Cleveland, O.	891,905	1,470,630	1,000,163
Republic I. & S. Co	Pittsburgh	504,352	832,028	351,146
Union Collieries Co	Pittsburgh	347,903	641,032	551,276
Inland Collieries Co	Harmarville	179,043	582,391	244,371
Superior Fuel Co	Russellton	156,949	264,378	57,606
Newfield By-Prod. Coal Co	Cleveland, O.	105,470	433,278	205,901
Consumers Mining Co	Steubenville, O.	300,924	623,320	514,747
Fair Haven Coal Co	Pittsburgh	68,492	58,499	36,986
Harper Coal Co	Turtle Creek	49,593	63,465	49,559
Sun Coal Co	Stoneboro	49,068	53,191	48,372
Hall Coal Co	Turtle Creek	47,882	50,176	46,277
Allegheny-Pittsburgh C. Co	Pittsburgh	276,835	420,072	252,802
Harwick C. & C. Co	Pittsburgh	323,708	542,037	286,227
Hillman C. & C. Co	Pittsburgh	.....	368,885	413,217
Monarch Fuel Co	East Brady	27,686	219,038	234,998
Clinton Block C. Co	Pittsburgh	29,780	116,034	89,954
Ollette Bros.	Bridgeville	.....	31,997	38,963
Montour Coll. Co	Pittsburgh	48,019	203,301	112,778
Wilson Bugle C. Co		.....	.....	36,091
Smaller operators		.....	.....	169,142
Total		5,574,086	10,707,940	7,174,556

THIRTIETH

Ebensburg Coal Co	Colver	430,614	614,893	651,914
Vinton Colliery Co	Vintondale	666,876	505,206	282,586
Brush Creek CM. Co	Indiana	377,574	589,006	235,200
Commercial CM. Co	Expedit	89,427	121,575	100,677
Graceton Coke Co	Graceton	200,635	187,264	161,205
Potter C. & C. Co	Corral	203,199	231,990	190,891
Homer City Coal Co	Homer City	105,420	110,000	99,255
Big Bend CM. Co	Expedit	43,485	50,670	96,260
Ridgeview Coal Co	Bolivar	98,416	104,038	63,043

Company	Address	1922	1923	1924
Maher & Graff Coal Co	Blairsville	106,108	48,800	59,596
Keystone Coal Co	Greensburg	161,964	188,399	106,346
Armorford CM. Co	Blairsville	75,500	79,500	35,000
Kiskiminitas Coal Co	Blairsville	106,108	48,800	46,911
Bells Mill Coal Co	Blairsville	56,660	55,528	44,545
Watson Coal Co	Saltsburg	129,721	103,828	72,222
Johnstown Smok. C. Co	Johnstown	150,213	139,235	129,857
Margaret CM. Co	Bridgeville	100,500	65,000	57,500
Penelec Coal Corp	Johnstown	70,313	114,188	124,758
Bethlehem Mines Corp	Bethlehem	218,109	448,311	376,870
Smith Coal Co	Indiana	63,500	46,034	36,635
Standard Smok. Coal Co	Indiana	34,034	40,814	38,238
Diamond Smok. Coal Co	Johnstown	.....	178,341	239,368
Irwin Gas Coal Co	Johnstown	16,881	33,967	29,398
Greensburg Fuel Co	Greensburg	13,300	31,957	41,728
Black Lick Coll. Co	Portage	.....	20,157	33,929
Commonwealth Coal Co	Clearfield	10,390	25,495	29,180
Caldwell Smok. C. Co	Philadelphia	27,723	14,618	21,147
Smaller operators		.....	.....	126,852
Total		4,133,413	4,753,803	3,531,111

As some important companies reduced their output materially in 1924 we lower the minimum tonnage reported.

Output of Coal in Canada.

Coal output in Canada during the year 1924 and four years previous in net tons was:

Provinces	1920	1921	1922	1923	1924
NOVA SCOTIA—					
Bituminous	6,437,156	5,734,653	5,348,830	6,543,055	5,557,429
NEW BRUNSWICK—					
Bituminous	171,685	180,358	288,656	276,614	215,632
SASKATCHEWAN—					
Lignite	335,222	332,117	249,559	433,357	477,191
ALBERTA—					
Anthracite	127,513	96,964	41,423	107	.....
Bituminous	3,419,147	2,871,919	2,511,759	3,709,785	2,104,502
Lignite	3,361,105	2,885,537	2,834,077	3,112,048	3,070,724
Total Alberta	6,907,765	5,854,420	5,387,259	6,821,940	5,175,226
BRITISH COLUMBIA—					
Bituminous	3,095,011	2,840,870	2,935,579	2,818,585	2,199,714
Total Dominion.					
Anthracite	127,513	96,964	41,423	107	.....
Bituminous	13,122,999	11,627,800	11,084,824	13,348,039	10,077,277
Lignite	3,696,327	3,217,654	3,083,636	3,545,405	3,547,915
Grand total	16,946,839	14,942,418	14,209,883	16,893,551	13,617,313

PENNSYLVANIA ANTHRACITE.

The anthracite coal fields of Pennsylvania are located in the easterly portion of the State, chiefly in Lackawanna, Luzerne, Carbon, Columbia, Northumberland and Schuylkill Counties. The fields are divided into four sections geologically: the Northern, the Eastern Middle, the Western Middle and the Southern. They are divided into three great trade regions: the Wyoming in the north, the Lehigh in the central portion and the Schuylkill in the southerly portion of the territory. These regions are in turn divided into 17 mining districts as follows:

Carbondale	Plymouth	Beaver Meadow	Panther Creek
Scranton	Green Mountain	East Mahanoy	East Schuylkill
Pittston	Black Creek	West Mahanoy	West Schuylkill
Wilkes-Barre	Hazelton	Shamokin	Lorberry
		Lykens Valley	

While the coal fields are of very limited extent compared with the great bituminous deposits of Pennsylvania, to say nothing of the coal deposits of the country in general, they are of great value not only by reason of the quality of the coal contained therein, but by reason of their proximity to the great centers of population where this particular fuel is most acceptable and serviceable.

The anthracite coal fields having been developed first 100 years ago, having been explored in minute detail and having been developed and operated by many important interests, have been described so often that they have, in fact, produced one might say, a literature of their own. Particularly exhaustive have been the facts brought forth by various investigations and inquiries of past years under the authority of Congress, executive departments and boards, the Legislatures of Pennsylvania and New York and other public bodies.

Probably no fact stands out more prominently now in view of the records of past years than the important feature that hard coal was furnished to the public at a very low cost during a long term of years, as the duly authorized selling prices of the recent past plainly demonstrate.

Statistics of production are available from 1807, but the customary amount referred to in the trade as the initial shipments is 365 gross tons in 1820. From that time on rapid progress was made despite many vicissitudes, the industry forging ahead more rapidly than coal mining advanced in other sections. It passed the 100,000 mark in 1829; the million mark in 1837, and the two million mark in 1844. Prior to this time the production of anthracite was practically the only mining carried on in a large way aside from the activities in Virginia In 1850 the production exceeded 4,000,000 tons; in 1860, 8,000,000 tons; in 1870, 15,000,000 tons; in 1880, 28,000,000 tons, thus, it will be seen, nearly doubling every ten years. From that time on the growth was slower. In 1890 the output was 46,000,000 tons; in 1900, 57,000,000 tons; in 1910, 84,000,000 tons, and in 1920, 88,000,000 tons.

Anthracite Production by Districts.

District	1922	1923	1924	District	1922	1923	1924
I	1,516,672	1,998,329	.....	XIV	2,362,011	4,552,515	.....
II	1,965,624	3,774,106	3,888,624	XV	2,362,011	4,082,506	4,029,531
III	1,664,655	3,135,811	3,229,029	XVI	1,799,645	3,222,590	2,790,885
IV	1,191,043	1,481,343	1,491,146	XVII ...	2,101,718	3,802,239	3,161,134
V	865,808	2,611,014	2,184,632	XVIII ..	2,359,184	3,873,146	3,533,530
VI	2,172,996	4,372,726	4,668,897	XIX	1,708,650	2,692,905	2,303,258
VII	1,595,943	3,059,691	2,475,481	XX	1,833,075	2,955,484	2,671,485
VIII	2,806,957	3,732,976	.....	XXI ...	2,539,482	4,083,059	3,236,302
IX	1,618,963	2,491,855	2,297,691	XXII ...	1,898,927	3,291,989	3,109,637
X	1,870,147	3,228,839	3,185,558	XXIII ..	1,976,230	3,431,954	3,340,149
XI	1,892,958	2,925,844	3,218,783	XXIV ...	1,741,655	2,811,572	2,698,923
XII	2,265,521	3,627,615	3,922,268	XXV ...	1,549,404	2,581,820	2,528,787
XIII	2,505,169	4,605,470	4,905,613	Total gr.	46,880,126	82,407,398	.....
				Total net.	52,505,741	92,296,285	.....

FIRST

(*See Supplement*)

SECOND

Company	Address	1922	1923	1924
Hudson Coal Co.	Scranton	1,237,875	2,558,923	2,740,680
Scranton Coal Co.	Scranton	200,980	317,521	324,443
Temple Coal Co.	Scranton	158,312	240,579	266,773
Archbald Coal Co.	Wilkes-Barre	84,803	138,815	106,275
Hillside C. & I. Co.	Scranton	78,847	164,286	202,163
Humbert Coal Co.	Scranton	70,535	136,266	103,056
Murrin Coal Co.	Scranton	34,995	92,501	96,346
American Coal Co.	Jermyn	5,600	18,630	10,098
Radiant Coal Co.	Scranton	71,897	34,870	19,812
Sunrise Coal Co.	Scranton	.....	15,696	3,072
American Coal Exch., Inc.	Scranton	.....	6,757	9,763
Duffy Coal Co.	Scranton	.....	2,811	2,188
Lincoln Coal Co.	Scranton	.....	.....	3,955
Total		1,965,624	3,774,106	3,888,624

THIRD

Company	Address	1922	1923	1924
Hudson Coal Co	Scranton	761,005	1,510,119	1,822,780
Glen Alden Coal Co	Scranton	468,829	840,476	633,255
Legitts Creek Anthracite Co.	Scranton	217,350	405,227	425,281
Von Storch Collieries Co.	Scranton	132,730	245,709	250,927
Mid City Coal Co.	Scranton	47,561	112,034	92,670
M. A. Franklin Coal Co.	Scranton	.....	14,498	4,116
Total		1,664,655	3,135,811	.....

FOURTH

Scranton Coal Co.	Scranton	369,071	644,601	694,960
Price Pancoast Coal Co.	Scranton	210,404	302,010	328,891
Pennsylvania Coal Co.	Scranton	185,432	332,711	361,572
Hudson Coal Co.	Scranton	188,442	99,888	86,266
Walter M. Stevens Coal Co.	Scranton	.....	2,358	1,507
Roaring Brook Coal Co.	Scranton	.....	17,555	14,600
Ransom Coal Co.	Scranton	.....	.....	3,350
Total		1,191,043	1,481,343	1,491,146

FIFTH

Glen Alden Coal Co.	Scranton	476,055	1,760,647	1,562,946
Hudson Coal Co.	Scranton	256,848	479,722	419,246
Scranton Anthracite Coal Co.	Scranton	20,299	154,050	51,517
W. Y. Moffat	Dunmore	24,428	63,474	58,638
Gibbons Coal Co.	Scranton	51,723	52,270	37,000
Black Diamond Coal Co.	Scranton	15,732	4,622	894
Park Hill Coal Co.	Scranton	5,769	20,711	22,953
Powell & Jennings Coal Co.	Scranton	3,600	23,803	5,982
Slocum Hollow Coal Co.	Scranton	12,354	51,710	25,456
Total		865,808	2,611,014	2,184,632

SIXTH

Pennsylvania Coal Co.	Dunmore	938,490	1,713,704	1,769,115
Glen Alden Coal Co.	Scranton	475,897	861,948	1,133,037
Hudson Coal Co.	Scranton	420,516	838,691	930,279
Scranton Coal Co.	Scranton	116,772	405,167	396,629
Nay Aug Coal Co.	Carbondale	24,109	50,472	54,790
Spencer Coal Co.	Dunmore	52,451	59,255	57,119
Carney & Brown Coal Co.	Dunmore	11,872	20,625	8,985
John J. Boland Coal Co.	Scranton	8,130	9,080	3,861
Scranton Anthracite Coal Co.	Scranton	12,657	27,260	18,140
Lackawanna Coal Co., Ltd.	Scranton	.....	271,798	265,275
Lackawanna Valley Fuel Co.	Scranton	.....	.....	31,267
Total		2,172,996	4,372,726	4,668,897

SEVENTH

Glen Alden Coal Co.	Scranton	744,308	1,355,338	1,327,090
Pennsylvania Coal Co.	Scranton	409,257	834,542	733,550

Company	Address	1922	1923	1924
T. F. Quinn Coal Co	Scranton	.....	.....	7,849
Jermyn & Co	Scranton	200,997	372,162	171,983
Suffolk Anth. Collieries	Scranton	.....	102,188	206,961
Lehigh & Wyo. Val. CM. Co.	Scranton	.....	156,019	28,048
Total		1,595,943	3,059,691	2,475,481

EIGHTH

(*See Supplement*)

NINTH

Lehigh Valley Coal Co	New York	943,062	1,492,522	1,374,664
Temple Coal Co	Scranton	347,701	490,148	376,969
Kingston Coal Co	Kingston	182,018	280,693	279,873
Mt. Lookout Coal Co	Scranton	100,686	128,903	206,681
John Anse Coal Co	Duryea	10,817	7,215	†
Harris-Denly Coal Co	Cleveland, O.	21,738	56,906	45,521
John-Fib Coal Co	Wyoming	10,832	19,674	†
Troy Coal Co	Plains	2,109	15,794	14,083
Total		1,618,963	2,491,855	2,297,691

†Idle.

TENTH

Hudson Coal Co	Scranton	485,201	863,998	1,022,926
Glen Alden Coal Co	Scranton	356,590	680,279	661,427
Conlon Coal Co	Scranton	37,490	73,746	67,776
Lehigh Valley Coal Co	Wilkes-Barre	473,774	729,611	671,389
Central Coal Co	Parsons	36,869	55,696	28,391
Haddock Mining Co	Dorrancetown	111,632	195,048	218,795
Colonial Colliery Co	Philadelphia	98,706	138,744	165,398
Traders Coal Co	Scranton	88,288	158,766	6,024
Raub Coal Co	Luzerne	49,285	100,461	98,328
East Boston Coal Co	Kingston	121,007	203,787	165,800
Miner's Mills CM. Co	Scranton	.....	28,703	39,304
Total		1,870,147	3,228,839	3,185,558

District Production Figures for Pennsylvania.

We are now able to present the official returns for four of the mine inspection districts of Pennsylvania. Owing to departmental changes these figures were not available when the tonnages for the other districts were presented. As a result they were not included in our Annual. Cut these out and paste them in the book and you will have the complete story.

FIRST ANTHRACITE DISTRICT

Company	Address	1922	1923	1924
Hudson Coal Co.	Scranton	292,765	426,454	453,952
Hillside C. & I. Co.	Scranton	251,248	417,569	431,277
Temple Coal Co.	Scranton	77,994	158,150	169,421
Connell Anth. Mining Coal Co.	Scranton	122,591	232,395	151,178
Mt. Jessup Coal Co., Ltd.	Peckville	163,547	247,980	104,777
Northern Anth. Coal Co.	Lopez	77,697	84,987	40,584
Racket Brook Coal Co.	Carbondale	89,025	153,613	141,240
Carbondale CM Co.	Carbondale	14,068	26,197	22,243
Clifford Coal Co.	Scranton	12,527	37,456	21,899
Richmondale Coal Co.	Scranton	12,944	23,102	26,409
Wilson-Hill Coal Co.	Carbondale	2,365	13,391	11,960
Superior Anth. Coal Co.	Carbondale	2,020	23,616	7,180
Bald Mt. Coal Co.	Peckville	.....	42,228	12,420
Red Haven Coal Co.	Scranton	.....	4,202	3,947
Total		1,516,672	1,998,329	1,598,487

EIGHTH ANTHRACITE DISTRICT

Pennsylvania Coal Co.	Scranton	1,515,506	2,629,781	2,271,290
Hillside C. & I. Co.	Scranton	344,781	618,505	530,082
Hudson Coal Co.	Scranton	146,130	249,382	264,392
Avoca Coal Co.	Avoca	.....	67,645	†
Barnum Coal Co.	Scranton	.....	37,844	.....
Benjamin Coal Co.	Scranton	.....	39,967	*
Clifford Coal Co.	Kingston	.....	17,516	34,207
East Pittston Coal Co.	Scranton	.....	15,816	*
O'Hara Coal Co.	Avoca	.....	5,760	*
Pittston Fuel Co.	Scranton	.....	17,661	*
Volpe Mining Co.	Pittston	.....	10,262	7,890
Yatesville Coal Co.	Pittston	.....	22,837	29,667
Lehigh & Wyoming Val. C. M. Co.	Dupont	.....	.....	3,679
Total		2,006,957	3,732,976	3,141,207

* Idle. † Washery burned December, 1923.

FOURTEENTH ANTHRACITE DISTRICT

Susquehanna Collieries Co.	Wilkes-Barre	952,220	1,503,176	1,738,544
Glen Alden Coal Co.	Scranton	519,652	1,006,850	1,067,857
Lehigh & W.-Barre Coal Co.	Wilkes-Barre	520,292	839,470	660,672
West End Coal Co.	Mocanaqua	339,047	577,440	506,426
Alden Coal Co.	Alden Station	227,882	369,331	352,720
E. S. Stackhouse Coal Co.	Shickshinny	49,529	63,467	33,277

District Production Figures for Pennsylvania.

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FIRST ANTHRACITE DISTRICT

Company	Address	1922	1923	1924
Hudson Coal Co.	Scranton	292,765	426,454	453,952
Hillside C. & I. Co.	Scranton	251,248	417,569	431,277
Temple Coal Co.	Scranton	77,994	158,150	169,421
Connell Anth. Mining Coal Co.	Scranton	122,591	232,395	151,178
Mt. Jessup Coal Co., Ltd.	Peckville	163,547	247,980	104,777
Northern Anth. Coal Co.	Lopez	77,697	84,987	40,584
Racket Brook Coal Co.	Carbondale	89,025	153,613	141,240
Carbondale CM Co.	Carbondale	14,068	26,197	22,243
Clifford Coal Co.	Scranton	12,527	37,456	21,899
Richmondale Coal Co.	Scranton	12,944	23,102	26,409
Wilson-Hill Coal Co.	Carbondale	2,365	13,391	11,960
Superior Anth. Coal Co.	Carbondale	2,020	23,616	7,180
Bald Mt. Coal Co.	Peckville	.....	42,228	12,420
Red Haven Coal Co.	Scranton	.....	4,202	3,947
Total		1,516,672	1,998,329	1,598,487

EIGHTH ANTHRACITE DISTRICT

Pennsylvania Coal Co.	Scranton	1,515,506	2,629,781	2,271,290
Hillside C. & I. Co.	Scranton	344,781	618,505	530,082
Hudson Coal Co.	Scranton	146,130	249,382	264,392
Avoca Coal Co.	Avoca	.....	67,645	†
Barnum Coal Co.	Scranton	.....	37,844	.....
Benjamin Coal Co.	Scranton	.....	39,967	*
Clifford Coal Co.	Kingston	.....	17,516	34,207
East Pittston Coal Co.	Scranton	.....	15,816	*
O'Hara Coal Co.	Avoca	.....	5,760	*
Pittston Fuel Co.	Scranton	.....	17,661	*
Volpe Mining Co.	Pittston	.....	10,262	7,890
Yatesville Coal Co.	Pittston	.....	22,837	29,667
Lehigh & Wyoming Val. C. M. Co.	Dupont	.....	.....	3,679
Total		2,006,957	3,732,976	3,141,207

* Idle. † Washery burned December, 1923.

FOURTEENTH ANTHRACITE DISTRICT

Susquehanna Collieries Co.	Wilkes-Barre	952,220	1,563,176	1,738,544
Glen Alden Coal Co.	Scranton	519,652	1,006,850	1,067,857
Lehigh & W.-Barre Coal Co.	Wilkes-Barre	520,292	839,470	660,672
West End Coal Co.	Mocanaqua	339,047	577,440	506,426
Alden Coal Co.	Alden Station	227,882	369,331	352,720
E. S. Stackhouse Coal Co.	Shickshinny	49,529	63,467	33,277
East Alden Mining Co.	Wilkes-Barre	20,033	33,827	28,097
Nanticoke Valley Coal Co.	Nanticoke	30,034	98,954	55,833
Total		2,658,689	4,552,515	4,443,426

SEVENTH BITUMINOUS DISTRICT

Carnegie Coal Co.	Pittsburgh	448,402	1,691,971	878,822
Pittsburgh Coal Co.	Pittsburgh	317,827	800,997	725,968
Pitts. & Eastern Coal Co.	Cleveland	146,911	245,042	287,752
American Zinc & Chem. Co.	Carnegie	200,843	317,268	229,836
Bertha Consumers Co.	Pittsburgh	343,359	595,367	406,955
Bulger Block Coal Co.	Pittsburgh	121,964	121,921	133,211
Greensburg Con. C. & S. Co.	Ligonier	82,070	150,444	115,736
W. H. Shinn Coal Co.	Pittsburgh	85,849	129,164	44,525
Superior Mining Co.	Lockvale	117,975	113,310	96,338
Hanover Coal Co.	Pittsburgh	101,906	132,863	157,807
Hugh McHugh Coal Co.	Reimersdale	31,288	50,727	33,360
Englert Bros. Coal Co.	Carnegie	126,100	83,636	60,666
Fayette Corp.	Pittsburgh	26,229	61,225	54,858
Carnegie C. & S. Co.	Carnegie	.....	30,415	20,975
McDonald Coal Co.	Pittsburgh	25,434	28,320	32,785
Smaller operators		.....	.....	124,396
Total		3,187,738	5,133,691	3,421,023

ELEVENTH

Company	Address	1922	1923	1924
Lehigh & Wilkes-B. Coal Co.	Wilkes-Barre	874,241	1,347,070	1,498,803
Lehigh Valley Coal Co.	Wilkes-Barre	536,683	831,060	877,454
Hudson Coal Co.	Scranton	420,272	747,235	827,358
Sullivan & Flynn Coal Co.	Wilkes-Barre	.....	478	15,168
Total		1,892,958	2,925,844	3,218,783

TWELFTH

Hudson Coal Co.	Scranton	684,066	922,297	1,336,713
Glen Alden Coal Co.	Scranton	668,716	1,259,206	1,142,044
Lehigh & Wilkes-Barre C. Co.	Wilkes-Barre	628,059	949,162	976,332
Kingston Coal Co.	Kingston	261,606	423,048	428,779
Plymouth Red Ash Coal Co.	Plymouth	11,759	21,359	13,585
Larksville Coal Co.	Plymouth	.....	12,000	5,615
Smaller companies		.....	.....	19,200
Total		2,265,521	3,627,615	3,922,268

THIRTEENTH

Glen Alden Coal Co.	Scranton	1,318,648	2,610,664	2,756,285
Lehigh & W.-B. Coal Co.	Wilkes-Barre	773,883	1,182,186	1,337,049
Lehigh Valley Coal Co.	Wilkes-Barre	259,798	465,190	435,731
Pittston C. M. Co.	Pittston	83,882	149,634	111,710
George F. Lee Coal Co.	Wilkes-Barre	22,944	69,826	85,207
Grand Tunnel Coal Co.	Philadelphia	46,013	127,970	179,651
Total		2,505,169	4,605,470	4,905,613

FOURTEENTH

(*See Supplement*)

FIFTEENTH

Jeddo Highland Coal Co.	Jeddo	832,636	1,158,441	1,141,446
Coxe Bros. & Co., Inc.	Wilkes-Barre	606,517	1,190,209	1,117,813
Lehigh Valley Coal Co.	Wilkes-Barre	362,748	654,580	696,118
Pardee Bros. Co., Inc.	Lattimer	353,674	542,824	486,102
Hazle Brook Coal Co.	Hazleton	55,369	421,965	453,018
East Point Coal Co.	Scranton	13,672	30,549	14,406
M. S. Kemmerer & Co.	Sandy Run	44,212	42,964	78,234
Wolf Collieries Co.*	Scranton	.....	40,972	42,394
Total		2,362,011	4,082,506	4,029,531

*Have no breaker. Coal prepared at Drifton breaker of Coxe Bros. & Co.

SIXTEENTH

Company	Address	1922	1923	1924
Cranberry Creek Coal Co	West Hazleton	490,467	840,132	707,675
Coxe Bros. & Co., Inc	Wilkes-Barre	296,314	531,857	550,920
Lehigh Valley Coal Co	Wilkes-Barre	.....	337,468	330,207
Tip Top Coal Co	Scotch Valley	.....	4,462	7,331
Lehigh & Wilkes-Barre C. Co	Wilkes-Barre	391,070	693,810	555,818
C. M. Dodson Coal Co	Bethlehem	176,354	303,814	232,810
Van Wickle Estate	Hazleton	129,081	154,409	116,268
Harwood Coal Co	West Hazleton	210,681	142,191	75,243
Evans Colliery Co	Beaver Meadow	46,948	112,796	92,262
Beaver Valley Coal Co	Baltimore, Md	40.341	36,613	.....
Candlemas Coal Co	Jeddo	16,469	65,040	.....
Haddock Mining Co	Wilkes-Barre	.....	.....	119,994
Scotch Run Coal Co	Scotch Valley	.....	.....	2,254
Total		1,799,645	3,222,590	2,790,885

SEVENTEENTH

Lehigh Coal & Navigation Co	Lansford	2,101,718	3,802,239	3,161,134

EIGHTEENTH

Phila. & Reading C. & I. Co	Pottsville	1,013,754	1,609,503	1,472,226
Lehigh Coal & Nav. Co	Lansford	258,228	528,854	436,187
Lehigh Valley Coal Co	Wilkes-Barre	231,909	269,853	339,283
Mill Creek Coal Co	New Boston	175,072	374,976	323,625
Hazle Brook Coal Co	Maryd	174,835	243,157	242,738
St. Clair Coal Co	St. Clair	225,696	297,437	307,462
Alliance CM. Co	Philadelphia	146,238	292,817	337,425
Schuylkill Valley Coal Co	Pottsville	31,602	45,181	7,192
Thouron Coal Co	Avoca	27,743	36,760	21,325
Gorman & Campion Coal Co	Tuscarora	32,769	59,760	33,506
Frackville Coal Co		.....	.....	11,038
So. Penn. Coll. Co	Philadelphia	.....	.....	1,523
Total		2,359,184	3,873,146	3,533,530

NINETEENTH

Phila. & Reading C. & I. Co	Pottsville	669,690	946,653	829,607
Lytle Coal Co	Wilkes-Barre	216,095	399,966	342,905
Buck Run Coal Co	Minersville	192,354	241,689	232,939
York Farm Coal Co	Pottsville	104,207	36,459	6,556
Cullen Fuel Co	New York	14,303	43,300	16,106
Sherman Coal Co	Pottsville	38,563	65,574	100,649
Black Heath Coal Co	Minersville	6,055	10,819	6,857
Butcher Creek Coal Co	St. Clair	10,700	28,916	33,795
Pine Hill Coal Co	Scranton	298,676	623,004	498,860
Repplier Coal Co	Minersville	118,971	253,739	234,984
Total		1,708,650	2,692,905	2,303,258

TWENTIETH

Company	Address	1922	1923	1924
Phila. & Reading C. & I. Co.	Pottsville	1,545,826	2,283,064	2,061,374
Lehigh Valley Coal Co.	Wilkes-Barre	287,250	672,420	610,111
Total		1,833,075	2,955,484	2,671,485

TWENTY-FIRST

Phila. & Reading C. & I. Co.	Pottsville	838,385	1,218,409	1,130,293
Lehigh Valley Coal Co.	Wilkes-Barre	652,945	1,129,868	1,005,161
Locust Mt. Coal Co.	Bethlehem	445,836	675,245	497,436
Suequehanna Collieries Co.	Wilkes-Barre	144,744	245,780	211,144
Hazel Brook Coal Co.	Hazleton	.....	219,530	115,708
Harleigh Brookwood C. Co.	Philadelphia	.....	.....	276,560
Total		2,539,482	4,083,059	3,236,302

TWENTY-SECOND

Phila. & Reading C. & I. Co.	Pottsville	800,667	1,102,222	1,201,154
Lehigh Valley Coal Co.	Wilkes-Barre	428,216	1,004,428	757,678
Harleigh-Brookwood Co.	Pottsville	234,000	365,821	361,305
Hazel Brook Coal Co.	Wilburton	147,118	407,890	375,979
East Bear Ridge Coal Co.	Mahanoy City	163,395	257,733	240,392
Laurel C. M. Co.	Mowry	19,163	46,297	17,989
Repplier Coal Co.†	Minersville	.....	107,598	36,140
Total		1,898,927	3,291,989	3,109,637

†Same as Hazel Brook.

TWENTY-THIRD

Susquehanna Collieries Co.	Wilkes-Barre	692,560	1,188,000	1,234,401
Phila. & Reading C. & I. Co.	Pottsville	797,975	1,226,000	1,205,042
Colonial Colliery Co.	Frackville	225,767	504,000	559,081
Greenough Red Ash Coal Co.	Shamokin	139,929	241,189	*
Excelsior Coal Co.	Shamokin	120,000	204,000	225,800
Shamokin Colliery C. Co.	Shamokin	53,470	68,765	115,825
Total		1,976,230	3,431,954	3,379,149

*Included in Colonial.

TWENTY-FOURTH

Phila. & Reading C. & I. Co.	Pottsville	945,894	1,428,169	1,563,465
Susquehanna Collieries Co.	Shamokin	347,505	649,376	593,012
Buck Ridge CM.Co.	Shamokin	102,526	155,550	.....
Shipman Koal Co.	Shamokin	96,431	151,502	178,724
Enterprise Coal Co.	Scranton	163,705	233,559	176,772
South Penn Collieries Co.	Philadelphia	.....	.....	161,409
Puritan CM. Co.		.....	.....	25,541
Total		1,741,655	2,811,572	2,698,923

TWENTY-FIFTH

Phila & Reading C. & I. Co.	Pottsville	936,546	1,630,993	1,526,221
Susquehanna Collieries Co.	Wilkes-Barre	612,858	948,827	993,793
Hazle Brook Coal Co.	Philadelphia	.....	2,000	8,773
Total		1,549,404	2,581,820	2,528,787

PENNSYLVANIA BITUMINOUS OUTPUT BY COUNTIES

Fayette Maintains Its Old Time Lead, with Washington and Westmoreland Following.

Production of bituminous coal in Pennsylvania, by counties, in 1923 and in five years previous was:

County	1918	1919	1920	1921	1922	1923
Allegheny ..	17,375,035	14,856,781	14,605,700	11,931,527	11,023,211	20,224,239
Armstrong .	6,051,753	4,665,232	5,248,000	3,388,762	3,265,848	5,061,732
Beaver	128,572	139,294	125,900	161,409	226,959	247,071
Bedford	1,050,528	704,289	640,800	317,244	340,434	597,496
Blair	279,817	181,209	172,700	92,144	98,206	169,276
Bradford ...	31,299	13,373	.....	55,296	7,904	10,330
Butler	1,397,927	1,128,192	1,292,400	923,391	1,837,961	1,856,319
Cambria ...	20,569,253	16,899,818	17,182,400	16,339,228	12,957,315	19,751,465
Center	1,984,664	1,129,296	1,457,300	764,994	1,207,859	1,356,503
Clarion	1,607,641	1,393,647	1,377,400	1,248,294	1,320,469	1,900 549
Clearfield ...	9,376,429	7,573,392	7,622,200	5,853,922	5,456,359	7,546,058
Clinton	360,123	288,100	289,700	83,641	146,150	260,551
Elk	968,868	947,595	963,400	878,201	855,105	1,147,125
Fayette	32,925,888	29,660,105	32,998,300	19,260,778	17,759,776	32,165,961
Greene	1,269,425	1,423,118	1,746,600	2,294,801	2,348,527	3,982,603
Hunt'gdon .	1,371,562	833,690	833,100	484,008	397,150	757,678
Indiana	12,743,190	8,526,404	9,613,900	6,357,971	7,620,831	10,475,299
Jefferson ...	5,140,833	3,841,478	4,749,400	2,707,894	2,900,435	4,381,693
Lawrence ..	107,086	140,054	94,500	193,657	208,907	281,708
Mercer	600,785	481,521	487,900	479,387	457,453	465,349
Somerset ...	10,264,083	10,433,752	9,913,000	8,975,808	7,628,253	8,530,618
Tioga	834,385	593,637	715,100	437,702	374,154	480,335
Wash'gton ..	23,537,603	19,515,856	22,575,700	14,716,984	12,572,477	24,499,103
West'land ..	28,121,234	24,947,773	22,933,000	18,066,398	20,639,693	25,408,870
Small mines.	*a*355,615	273,783	.....	.....	*a*50,682	83,625
Total ..	178,550,741	150,758,154	157,700,400	116,013,942	113,148,308*	171,879,913

a Includes Cameron, Fulton, Lycoming and McKean counties.
* Includes 238,957 tons from Wagon mines by rail.

Coal Trade at Havana.

Coal imported into Cuba through the port of Havana during 1924, as compared with such imports during 1921 and 1923 was as follows:

	1921	1923	1924		1921	1923	1924
January ..	38,643	43,447	53,596	July	30,607	69,000	39,400
February .	39,686	60,966	35,863	August ...	35,597	49,815	45,753
March ...	68,108	49,335	34,215	September.	27,535	28,122	35,530
April	30,038	41,800	38,751	October ..	18,598	35,240	39,383
May	13,535	28,759	21,514	November.	46,314	32,322	47,417
June	55,670	46,000	34,908	December..	43,605	40,233	54,305
				Total ..	447,936	525,039	480,635

Pennsylvania Bituminous Deposits and Reserves.

Total deposits, amount mined and amount recoverable, by counties, is shown in the following table:

County	Original Deposit Tons	Mined Out Tons	Recoverable Tons
Allegheny	3,180,400,000	969,200,000	1,486,900,000
Armstrong	3,750,700,000	107,290,000	2,491,100,000
Beaver	1,116,400,000	1,400,000	560,000,000
Blair	61,900,000	11,900,000	25,000,000
Bradford	39,000,000	300,000	19,000,000
Butler	4,550,000,000	30,000,000	2,300,000,000
Cambria	5,383,000,000	466,900,000	3,638,080,000
Cameron	42,000,000	100,000	20,000,000
Center	422,000,000	60,000,000	184,000,000
Clarion	1,817,000,000	37,000,000	1,059,000,000
Clearfield	3,902,000,000	308,210,000	2,165,400,000
Clinton	93,000,000	5,000,000	44,000,000
Elk	610,000,000	27,000,000	297,000,000
Fayette	5,229,734,000	899,544,000	2,604,400,000
Greene	10,330,094,000	42,490,000	7,011,400,000
Indiana	6,339,400,000	299,200,000	4,288,700,000
Jefferson	3,420,000,000	180,000,000	1,900,000,000
Lawrence	611,000,000	300,000	311,000,000
Lycoming	68,000,000	200,000	34,000,000
Mercer	368,000,000	40,000,000	172,000,000
McKean	320,700,000	300,000	136,000,000
Somerset	6,091,800,000	187,384,000	3,986,900,000
Tioga	124,400,000	23,200,000	52,000,000
Washington	10,526,023,000	557,763,000	5,481,680,000
Westmoreland	6,381,504,000	1,218,141,000	3,297,500,000
Hunt'don, Bedford, Fulton	391,000,000	46,843,000	265,800,000
Total	75,259,055,000	5,519,665,000	43,830,860,000

Briquet Manufacturing Companies.

The following list of eastern anthracite briquet manufacturers may be of interest to retail dealers looking for substitutes for domestic sizes:

Burnite Coal Briquet Co., 543 New Jersey avenue, Newark, N. J. Fuel Briquet Co., 520 Brunswick avenue, Trenton, N. J.; General Briquetting Co., 25 Broad street, New York; American Briquet Co., Drexel Building, Philadelphia; Anthracite Briquette Co., Sunbury, Pa.; Lehigh Coal & Navigation Co., 437 Chestnut street, Philadelphia: Scranton Anthracite Briquet Co., Dickson City, Pa., Navicoal Corporation, Perth Amboy, N. J.

Of the plants that were active in 1923, the Burnrite Coal Briquette Co., Newark, N. J., and the Scranton Anthracite Briquette Co., Dickson City, Pa., were idle throughout 1924. An experimental plant was put in operation at Akron, Ohio, by the P. E. Welton Engineering Co. for demonstration purposes only. The manufacture of a domestic fuel by the Trent process was experimented with by the Superfuel Corporation of New York at its plant at Newark, N. J. Information from the company, it is stated, indicates that the plant will be operated on a commercial basis in 1925.

ANTHRACITE INDUSTRY IN 1924

Statement of Anthracite Bureau of Information.

Except for "outlaw" strikes which in 1924 infected the anthracite region to a greater extent than in any other year in the history of the industry, conditions were as close to normalcy as is ordinarily obtained. Assuming that the tonnage for December will equal the customary output for that month, the total output for the year, including colliery consumption, will have amounted to between 79,600,000 and 80,000,000 gross tons.

This compares with an average annual production of 79,510,045 gross tons for the last 15 years, omitting the two abnormal war years of 1917 and 1918, and the strike year of 1922—the two being years of unusually heavy production, and the one, because of complete idleness for more than five months, being a year which ran approximately 30,000,000 tons below normal. If those three years be included in the comparison the average production annually for the last fifteen years was slightly more than 78,615,000 gross tons.

As indicative of the non-fluctuating character of the anthracite industry, its production not being as responsive to changing industrial conditions as is the production of bituminous coal, it may be stated that in eight years since 1910 the tonnage did not exceed 82,000,000 gross tons or fall below 78,000,000 tons. Omitting the three years mentioned, the minimum production in the period was in 1912, 75,322,855 tons or 5.3 per cent below the average, and the maximum production, somewhat abnormal because of the deficiency produced by the strike of the previous year, was in 1923, 83,338,401 gross tons or a little less than 5 per cent above the average. The difference between the years of lowest and highest production was 8,015,546 gross tons or about 10 per cent.

Production Exceeds the Average.

The production in 1924 would probably have exceeded the 15-year average by from 2,000,000 to 4,000,000 tons and have approached the record made in 1923, had it not been for a disastrous freshet that drowned out many mines in the latter part of September and for what has been, as already stated, the worst series of outlaw strikes ever known in the hard coal region. The chief center for the outlaw strikes was in the Wyoming field and several of them involved as many as 12,000 men.

The responsible officials of the United Mine Workers have repudiated these strikes as violations of the agreement and have expressed their condemnation in a practical way by revoking, on at least two occasions, the charters of the local unions that were in rebellion against the established order. The most flagrant instance of this strike outlawry occurred in the mines of the Pennsylvania Coal Co. where eight collieries, employing about 11,000 men were idle from November 24th until the end of the year

The striking workmen in this instance as in most of the others have been influenced by what is known as the General Grievance Committee, self-constituted groups which are not recognized in the agreements, and are consequently of themselves of an outlaw character. The statement made on behalf of the Pennsylvania Coal Company by its vice-president and general manager, A. K. Morris, was to the effect that up to that time the employes on strike in the mines of that company had lost in wages approximately $1,685,000.

Complete figures of the tonnage which might have been mined and was not mined, by reason of these strikes, are not available, but from such information as has been obtained a conservative estimate would place such lost tonnage at not less than 2,000,000 tons. When to this deficiency is added the tonnage lost by reason of the September flood, it can be seen that but for these occurrences, the production in 1924 would have closely approached the record made in 1923, which, with the exception of the war years of 1917 and 1918, was the largest in the history of the industry.

Wages During the Year.

Wages in the anthracite region during the year 1924 were at the highest level ever known, having been based upon the award of the United States Coal Commission appointed by President Wilson in 1920 and enhanced by the action of Governor Pinchot in September, 1923.

The principal effect of the Governor's action was to add a flat increase of ten per cent to all existing rates of wages and in addition, made necessary certain adjustments of working hours which, while not adding materially to the earnings of the workmen, did add to the cost of anthracite production. As a result of this piling of Ossa on Pelion, the labor cost involved in the production of anthracite in 1924 was practically three times what it was prior to the World War.

A recent investigation by the National Industrial Conference Board giving comparison of earnings in five basic industries shows that workers in the anthracite region had increased their earnings 196 per cent from 1914 to 1924 compared with which workers on the railroads and in manufacturing establishments had gained 128 per cent, workers in the building trades had gained 101 per cent and the wages of workers in the agricultural pursuits had increased 70 per cent.

The peak in the cost of living as reported by the United States Bureau of Labor Statistics was, in June, 1920, when the cost of living was 116.5 per cent above 1913 and 110.2 per cent above 1914. During the first nine months of 1924, the cost of living, according to the same authority, was about 70 per cent above 1913, while the anthracite wage rates are reflected in earnings showing nearly 200 per cent increase. The cost of living and the wage rates in other industries have receded since the war. The wage rates in the anthracite region are now about 30 per cent above the war-time peak.

These conditions are naturally reflected in the prices for the domestic sizes of anthracite which have consistently maintained, during the last year, a higher price level than in any other previous period in a generation, the effect of which has been shown in the lessened movement to distant consuming territory to which the higher freight rates add another burden to the cost of the consumer.

But, while the prices of prepared sizes of anthracite have of necessity, in order to meet the increased cost, been held at high levels, the smaller sizes, or what are designated as the steam sizes, have been unable to bear any part of the increased burden imposed by the Pinchot settlement of 1923. Owing to the fact that these sizes are used principally as steam making fuel they must compete with the more cheaply mined bituminous coal and are accordingly, and also of necessity, sold at less than the cost of mining and preparation, and in sympathy with the lower prices of bituminous coal resulting from the over-production of that commodity, the prices of the steam sizes of anthracite have been lower in 1924 than they were in 1923.

Some amelioration of these conditions may be hoped for in the not distant

future, however, because of the fact that the coal-consuming public is learning that these small sizes have actual merit as a domestic fuel. This is in line with sound domestic economy as it points out a way to reduce the domestic fuel bill without expensive changes in heating equipment, and is also in line with real conservation as it tends to make available for household use a greater proportion of what, after all, is the only safe, clean, reliable household fuel with which the public in the northeastern part of the United States is familiar.

Thirty or forty years ago, pea coal was considered a steam fuel, but since that time many persons by actual tests have found that they can run small heaters, laundry stoves and kitchen ranges with pea coal at a considerable saving over the cost of chestnut or stove sizes. Pea coal is now recognized as a domestic fuel, and only a relatively small part of the production is used for other purposes. It sells at the mines at about two-thirds the price of stove or chestnut.

In a similar way, a growing number are finding that coal bills can be reduced by using buckwheat for domestic heating, either by itself in appropriate heating equipment, or in combination with larger sizes in their old furnaces. As the price of buckwheat at the mines is barely one-third as much as the prepared sizes, the saving is a large item and the consumer is still using good clean anthracite.

Taxation.

The problem of mounting taxation is one which concerns every citizen, and the Pennsylvania legislature is about to receive a report from its own specially appointed Tax Commission, which for two years has been gathering data on taxation and its effects. The anthracite industry, like every other industry and, indeed, every individual, has had many complicated taxation problems to encounter.

One troublesome complication arose out of the effort, in some of the anthracite counties, to create what in effect would be a new method of taxing mineral properties by estimating their content, estimating a unit value per ton in the ground, and taking this theoretical result as the actual value upon which taxation could be based. The net result of this was that theoretical values of $10,000 or even $12,000 per acre would be placed on lands which had actually sold for as low as $600 or $800 per acre. One county endeavored to raise coal land valuation, under this system, from about $60,000,000 to more than $422,000,000. Under any such system, by reason of the vastly enhanced local and county taxes which would be collected, a burden of as much as 50 to 75 cents additional would be placed on every ton of prepared anthracite produced in that county.

The air was somewhat cleared when Justice Walling, of the Pennsylvania Supreme Court, on May 12th, decided in what is known as Kemble's Appeal that mineral land was like any other real estate; that it must be taxed on the basis of actual selling value as such value is determined by competent witnesses and not on any theoretical calculation of what lies in the ground; and that this principle was not only the law of Pennsylvania but that it had been upheld as such in a long and unbroken line of decisions.

In the particular case of this appeal the upshot was that a small tract of inferior land which had been theoretically valued as worth more than $800 an acre, was finally adjudged worth only $200 an acre as the outside selling price, and its tax levy was imposed accordingly. It is thought that this decision, together with others on similar issues raised within and without the anthracite region, will exert a strong influence in clarifying and solving this aspect of mineral land taxation.

ORIGIN OF "ANTHRACITE"

Word in Modified Form Was Used by Ancient and Medieval Writers.

The question has been raised as to the initial use of the word "anthracite" in the coal trade. Knowing that the British coal trade antedates by centuries the American coal trade, we communicated with the *Colliery Guardian*, of London, and from the editor of that paper have received an interesting reply, reading in the main as follows:

"I have recently made some brief research into the origin of the word 'anthracite' as a commercial term. The word was used, of course, in a scientific sense at a very early date. Theophrastus, who was a contemporary of Aristotle and an authority on stones, speaks of 'anthraces' or 'anthracites' as a mineral resembling 'anthrax' (charcoal) obtained from the ground.

"This may have been coal, but probably not anthracite as we know it, or even pseudo-anthracite, since nearly all the deposits in the Levant are of the lignitic type. It is not improbable, however, that he was referring to gems, possibly rubies.

First Reference to British Anthracite.

"The earliest reference to British anthracite that I have come across is one by Sir Humphrey Davy (Chem. Philos. 313) (1812) to the effect that the 'anthracite of Kilkenny has all the character of well-burned charcoal'—curiously enough, almost identical with the expression used by Theophrastus. Camden, in his 'Britannia' (1807), uses the word 'lithanthraces.'

"I do not think the word 'anthracite' was used commercially in this country until after the middle of the last century. Before that the anthracite of South Wales was generally termed 'stone coal.' The *Colliery Guardian* was first published in the year 1858. In the earlier numbers 'anthracite' was quoted in our market reports as delivered at Llanelly, and 'stone coal' quoted delivery Kidwelly (Pembrokeshire).

Was Once Called Stone Coal.

"About the middle of 1858 the latter term seems to have been dropped. In the early days, in addition to 'stone coal,' the product was sometimes called 'glance coal,' 'culm,' or simply 'Welsh coal.'

"Mr. George L. Kerr, Secretary of the Mining Institute of Scotland, who wrote to me recently on the subject, thinks that the word 'anthracite' was first used by mineralogists and afterwards was adopted as a trade name.

Some Quaint Definitions.

"A book on 'Mineralogical Nomenclature' was published by Thos. Allan in 1808, in which he defined 'anthracite' as a 'Massive glance Coal: native mineral carbon: anthracite: plombagine charboneuse or anthrocolite: Kohlenblende: Houillite: blende charboneuse: Carbon oxydule or Geanthrace: Coalblende: blind coal, etc.'

"A book published by Richard Kirwan in 1796 on the 'Elements of Mineralogy' contains what appears to be a reference to anthracite, which he puts in the class of 'Native Mineral Carbon—blende kohle of Werner.' He mentions a similar coal found near Kilkenny (which could only be anthracite) and the 'culm' of

Wales. But he does not use the word 'anthracite.' The Welsh people do not use the word, but speak of 'glo careg' (stone coal).

"I had suspected that the word 'anthracite' as a trade description might have come from America, where, of course, it was used for smelting iron at an early date. A cursory examination of such authorities as Nicoll, Chance and others failed to give any corroboration, but I think it is not unlikely that the word may have been adopted in South Wales following upon Sir Henry de la Beche's report on the South Wales Coalfield, published in 1846, and Prof. Rogers' report on the anthracites of Pennsylvania, published in 1853.

"The difficulty about the use of such words by early writers is that one cannot always be sure what they are referring to. Thus the earliest references to coal in medieval literature undoubtedly refer to charcoal and not mineral coal as we know it."

Anthracite Miners' Wages Rise 190%.

The average hourly earnings of all groups of wage earners in anthracite mining have reached the highest point on record. An investigation made by the National Industrial Conference Board, New York City, since the renewal of the two-year agreement between the miners and the operators, providing for a 10 per cent wage increase, shows that the increase in average hourly earnings is 190 per cent over the rate of June, 1914.

The composite figure of average hourly earnings in the industry covering all groups of wage earners; that is, common, semi-skilled and skilled labor, both inside and out, as well as contract miners, increased from 27.8 cents in June, 1914, to 80.7 cents in December, 1923. That the mine workers have unusual opportunities for steady employment is shown by the fact that since December, 1923, further figures denote practically no change in the average earnings up to May, 1924, the general trend remaining at as steady a level as it did under the old contract.

The highest percentage of increase took place in the case of common outside labor, 218 per cent. The next highest recorded was for semi-skilled inside labor, 207 per cent, closely followed by common inside labor, 205 per cent. Semi-skilled outside labor increased 188 per cent. The lowest per cent of increase for both inside and outside labor was noted for skilled work, being 181 per cent and 170 per cent, respectively. The percentage of increase of contract miners was 188 per cent.

The board's index figures reveal that anthracite mining wages have risen to a higher peak than those of any other basic industry.

Anthracite Wage Increases.

As to the number and size of the wage increases secured by the anthracite mine workers since the beginning of the war, it may be said that the record is as follows: April, 1916, 7 per cent; May, 1917, 10 per cent; November, 1917, 25 per cent; November, 1918, 25 per cent; April, 1920, 20 per cent for miners and 17 per cent for company men and 10 per cent, as per Pinchot plan, September, 1923.

Anthracite Shipments and Production by Counties, 1923

The first of the following tables shows for each anthracite-producing county of Pennsylvania, the total production and shipments of anthracite, with the corresponding values, during the calendar year 1923, as reported to the Geological Survey by the anthracite operators. The difference between shipments and production 9,910,000 gross tons, valued at $22,390,000 represents the quantity sold to local consumers and used at the mines for power and heat.

	Shipments		Total Production	
	Gross Tons	Value	Gross Tons	Value
Berks *a*	23,000	$49,000	42,000	$79,000
Carbon	2,509,000	14,847,000	2,830,000	15,696,000
Columbia	940,000	5,146,000	1,079,000	5,386,000
Cumberland, Lancaster and York *a*	76,000	71,000	113,000	100,000
Dauphin	807,000	5,223,000	1,303,000	5,873,000
Lackawanna	16,861,000	114,842,000	18,446,000	119,417,000
Lehigh and Montour *a*	34,000	41,000	35,000	42,000
Luzerne	28,076,000	191,922,000	31,996,000	202,140,000
Northumberland	5,249,000	32,720,000	6,197,000	34,376,000
Schuylkill	17,802,000	112,558,000	20,161,000	116,416,000
Sullivan	281,000	1,913,000	294,000	1,978,000
Susquehanna and Wayne	770,000	5,066,000	842,000	5,285,000
Total	73,428,000	$484,398,000	83,338,000	$506,788,000

a Counties producing dredge coal only.

Production of Anthracite in 1923, by Fields (Gross Tons)

The table below presents figures of production for the five fields that comprise the anthracite region, and shows what part of the total output was contributed by breakers, washeries, and dredges.

Field	Breakers	Washeries	Dredges	Total
Eastern Middle	7,039,000	122,000	.....	7,161,000
Western Middle	16,548,000	1,019,000	194,000	17,761,000
Northern	43,510,000	1,859,000	28,000	45,397,000
Southern	11,077,000	1,016,000	632,000	12,725,000
Sullivan County	294,000	.....	.....	294,000
Total	78,468,000	4,016,000	854,000	83,338,000

A Vast Invisible Wastage.

An official statement, apparently based on careful calculations, declares that between 1860 and 1920 no less than 660,000,000 tons of iron and steel were wasted through rusting in use. Something like 11,000,000 tons of this extremely hard material passed off into the atmosphere each year, as an average, though naturally the wastage was greater during thelatter part of the term than during the former, despite all modern methods of preservation, for the quantity in use was so much greater.

It seems remarkable that an invisible loss should in a double sense be so weighty, as the amount of wealth involved in this wastage would constitute each year a huge fortune.

Shipments of Anthracite Coal, by Months.

The shipments of anthracite coal by months for six years have been as follows:

Month	1918	1919	1920	1921	1922	1923
January	5,726,712	5,934,231	5,868,835	5,740,538	4,848,053	6,671,822
February	5,812,082	3,871,932	5,046,483	5,966,101	5,239,014	5,951,713
March	7,276,777	3,938,908	†6,077,821	5,737,771	6,778,667	7,183,518
April	6,368,373	5,224,715	4,814,211	5,967,465	.....	6,173,774
May	6,887,256	5,711,915	6,155,875	5,793,895	.....	6,564,285
June	6,867,669	5,619,591	6,319,957	6,031,937	.....	6,634,787
July	7,084,775	6,052,334	6,389,100	5,462,760	.....	6,260,053
August	7,180,923	6,144,144	6,207,653	5,575,115	.....	6,672,855
September	6,234,395	6,687,401	3,592,954	5,519,412	‡4,507,132	2,194,940
October	6,296,366	6,560,150	6,240,901	5,872,783	6,567,928	6,564,526
November	5,276,659	5,971,671	5,765,347	5,314,014	6,420,102	5,828,754
December	5,736,260	6,138,460	6,436,320	4,635,922	6,454,876	†5,969,594
Total	76,649,918	66,855,462	68,915,460	67,617,713	40,815,777	72,668,621

† Estimated.
‡ Includes scattering shipments in April of coal mined latter part of March.

No shipments in April, May, June, July and August, 1922, on account of strike.

Corresponding data for year 1924 has not yet been compiled by Anthracite Bureau of Information.

Anthracite Record Months.

The record of large monthly tonnages runs as follows:

Jan., 1923.....6,671,822	May, 1917.....6,917,525	Sept., 1917.....6,372,756
Feb., 1921.....5,966,101	June, 1917.....7,049,037	Oct., 1917.....7,110,950
Mar., 1918.....7,276,777	July, 1918.....7,084,775	Nov., 1917.....6,545,313
Apr., 1915.....6,665,625	Aug., 1918.....7,189,923	Dec., 1922.....6,454,876

There is no high record month back of April, 1915.

Shipments Tell Trade Story.

The U. S. Geological Survey presents certain statements in net tons showing total monthly production of anthracite but it occurs to us that the trade is so accustomed to tabulations showing the shipments of coal in gross tons that the publication of these other details serves merely to confuse. Of course the shipments rise and fall more or less in proportion to the production (although not precisely so) and yet it seems to us that it is much more advantageous to restrict the comparative monthly statements to the customary form of shipments in gross tons and thus avoid the confusion which is practically certain to arise when statements are presented which differ by something like 25 per cent from the information that the trade is accustomed to.

As a matter of record, we present the Survey figures below:

Production during the year 1913 amounted to 91,525,000 tons; 1914, 90,822,000 tons; 1915, 88,995,000 tons; 1916, 87,578,000 tons; 1917, 99,612,000 tons; 1918 98,826,000 tons; 1919, 88,092,000 tons; 1920, 89,598,249; 1921, 87,500,000; 1922, 54,682,022; 1923, 93,339,009; 1924, 90,000,000.

EMPLOYES IN ANTHRACITE MINES IN 1923

Slight Increase Shown Over Previous Year's Figures—Days Worked Well Up to Limit of Possibilities.

The number of employes in and about the anthracite mines increased slightly in 1923. Final returns from the producers of anthracite (including those in Sullivan County) show a total of 157,743 men employed, an increase when compared with 1922, of 0.6 per cent. This increase was insufficient, however, to bring the total employed to the level of 1921, when 159,499 men were employed, and it remained far less than in the pre-war years. The reports offer no explanation of the increase, but it doubtless may be ascribed to the steady demand for anthracite that prevailed throughout the year, and the more settled labor conditions. As is usual in periods of urgent and sustained demand, the washeries were benefited largely, and the principal increase over 1922 occurred at such operations.

The average number of days worked by mines and breakers was 269, an increase of 118 over the strike year 1922, and three days less than in 1921. In this respect also the washeries were benefited and the number of days operated increased from 136 in 1922 to 216 days in 1923. The days worked by dredges increased from 169 to 204.

The mines in the Lehigh and Schuylkill regions were operated almost exactly the same number of days—274 and 275 respectively—and those in the Wyoming region 264 days. Measured by the number of days worked, Sullivan County with an increase of 113 per cent, showed the greatest improvement. The Wyoming region showed an increase of 80 per cent, Schuylkill 76 per cent, and Lehigh slightly less than 75 per cent.

In studying these figures of average days worked it should be remembered that they are weighted averages and take into account the number of men employed at each individual operation. It should be remembered also that office workers and salaried employes have been excluded.

MEN EMPLOYED AND DAYS WORKED IN THE ANTHRACITE REGION IN 1923

Region	Average number of men employed					Average number of days worked
		Underground				
	Surface	Miners, etc.	Other	Total underground	Total	
LEHIGH:						
Breaker product	6,423	8,189	5,714	13,903	20,326	274
Washery product	299	....	.....	.....	299	191
Dredge product	14	....	.....	.....	14	153
	6,736	8,189	5,714	13,903	20,639	273
SCHUYLKILL:						
Breaker product	15,062	20,860	11,717	32,577	47,639	275
Washery product	1,354	....	....	.....	1,354	226
Dredge product	357	....	....	.....	357	207
	16,773	20,860	11,717	32,577	49,350	273

Region	Surface	Underground: Miners, etc.	Underground: Other	Underground: Total underground	Total	Average number of days worked
WYOMING:						
Breaker product	18,308	42,956	24,750	67,706	86,014	264
Washery product	961	....	....	.....	961	211
Dredge product	3	....	....	.....	3	98
	19,272	42,956	24,750	67,706	86,978	264
SULLIVAN COUNTY:						
Breaker product	241	357	178	535	776	241
Total breaker product	a40,034	72,362	42,359	114,721	154,755	269
Total washery product	2,614	....	....	.....	2,614	216
Total dredge product	374	....	....	.....	374	204
Grand total	43,022	72,362	42,359	114,721	157,743	268

a Includes comparatively small number of washery employes who could not be separated from breaker employes.

With the exception of the short general strike that was called at the expiration of the one-year agreement that terminated on September 1, 1923, the year was comparatively free from strikes, and on the average 19 days were lost through that cause by the men on strike. As computed on the basis of the total men employed the average loss was a little more than 16 days. As shown by the table below this compares favorably with other recent years.

STRIKES AND LOCKOUTS IN THE PENNSYLVANIA ANTHRACITE REGION, 1919-1923

District	1919 Days	1919 Men	1920 Days	1920 Men	1921 Days	1921 Men	1922 Days	1922 Men	1923 Days	1923 Men
Lehigh	4	6,518	15	15,666	18	10,847	137	19,066	19	18,593
Schuylkill	4	4,212	17	41,945	5	5,523	137	41,893	19	43,524
Wyoming	8	24,409	23	39,229	17	35,747	138	80,753	20	72,772
Sullivan County	.....		..	.....	..	.....	144	730	18	696
Total	7	35,139	19	96,840	16	52,117	138	142,142	19	135,585

Statistics compiled by H. L. Bennit, U. S. Geological Survey.

Welsh Coal Analyses.

To permit comparisons being made with American smokeless coal, the following figures are presented showing the analyses of three different samples of the Cardiff coal designated as Best Admiralty Large:

	Per Cent	Per Cent	Per Cent
Fixed Carbon	81.90	80.80	79.50
Volatile	12.13	13.60	15.11
Ash	4.86	4.55	4.23
Water	1.11	1.05	1.16
	100.00	100.00	100.00

	Per Cent	Per Cent	Per Cent
Sulphur	.79	.89	.98
Calories	82.66	82.76	82.79
B. T. U.	14,879	14,897	14,902
Evaporative Power	15.39	15.41	15.41

The coals coming under the head of Best Admiralty are: Cambrian, Dowlais, Ferndale, Glamorgan (Hoods), Hills Plymouth, Lockets, Naval, Nixons, Ocean, Penrikyber, Standard, Cyfarthfa, and National.

ANTHRACITE RESIZING

With a view to establishing more definite standards for the sizing and preparation of anthracite, the Anthracite Operators' Conference has recommended to the industry that the following standards be adopted by all producers effective April 1st, 1925.

"Broken": Coal which passes through a round mesh 4 7/16 inch and will not pass through a mesh 3 7/16 inch.

"Egg": Coal which passes through a round mesh 3 7/16 inch and will not pass through a mesh 2 8/16 inch.

"Stove": Coal which passes through a round mesh 2 8/16 inch and will not pass through a mesh 1 9/16 inch.

"Chestnut": Coal which passes through a round mesh 1 9/16 inch and will not pass through a mesh 11/16 inch.

"Pea": Coal which passes through a round mesh 11/16 inch and will not pass through a mesh 8/16 inch.

While the above screens are to be used for testing purposes at the breaker, it is recognized that to provide for differences in the fracture of coal, the screens used in the breaker must be varied so as to permit the preparation of coal to conform to the standards contemplated by the use of the testing meshes.

While the new chestnut made in accordance with the above standards of sizing contains an increased percentage of large pea—as compared to the chestnut produced years ago—it has been demonstrated by practical test that its fuel value is equal to, if not greater than, the old standard. The remaining pea coal will be more uniform in size.

It is also recommended that the maximum of undersize coal shall not be more than 15 per cent, with the proviso that in the case of chestnut only an additional 5 per cent shall be allowed for unavoidable breakage.

Permissible percentages of bone or slate range from 2 to 7½ per cent, depending upon size of the coal, it being impossible even with the utmost care in preparation to exclude all impurities.

In making this announcement Samuel D. Warriner, chairman said:

"Emergency measures adopted during the war and in periods of scarcity following the war have resulted in more or less diversity in sizing and in preparation as between different operators, and our objective at the present time is to overcome this variance.

"While it may seem to be a very simple matter to set up rigid standards and regulations for the sizing of coal, many difficulties have been encountered owing to the fact that coal in the different collieries does not fracture in exactly the same way or to the same extent. Different coals prepared with identical screens result in a different appearance in product. The aim is to arrive at uniform standards and to eliminate sub-standard products.

"Aside from this, the principal effect of the action taken will be to cut down the tonnage of pea coal and to that extent to eliminate as far as possible one of the sizes of anthracite for which demand has decreased owing to improvements in heating devices, and increase the supply of chestnut which has been inadequate."

Maxium size of Buckwheat is reduced by above arrangement to 8/16" or ½". No changes announced on other sizes, to wit; Rice 5/16" maximum, Barley 3/16" maximum, 1/16" minimum.

ANALYSES OF PENNSYLVANIA ANTHRACITE

Elements as Shown by Mine Samples and by Commercial Coal in Various Sizes.

Analyses of anthracite are frequently desired by the trade. As is generally known, producers of this coal do not seek to exploit the constituent elements, as is the case of some producers of bituminous coal, and the amount of material available on this subject is accordingly somewhat limited. In this branch of the trade much depends on the size of the coal, as of course, small coal is bound to carry a larger amount of slate and other impurities, and consequently a greater degree of ash.

There are other circumstances that make analyses less valuable than in the case of bituminous coal, but as a basis at least for investigations along this line we give below certain analyses of the actual coal as shown by mine samples and in addition certain analyses of commercial coal according to sizes.

Analyses of Mine Run Anthracite.

The following figures show certain analyses of Pennsylvania run-of-mine anthracite coal, taken from mine samples in the different fields:

Northern Field.

	Per Cent
Moisture	2.00
Vol. Matter	6.00
Fixed Carbon	84.40
Ash	7.00
Sulphur	0.60

Western-Middle Field.

	Per Cent
Moisture	3.30
Vol. Matter	3.80
Fixed Carbon	81.50
Ash	10.65
Sulphur	0.75
Specific Gravity	1.66

Eastern-Middle Field.

	Per Cent
Moisture	3.90
Vol. Matter	3.10
Fixed Carbon	86.40
Ash	6.00
Sulphur	0.60
Specific Gravity	1.62

Southern Field.
(Panther Creek)

	Per Cent
Moisture	3.00
Vol. Matter	4.00
Fixed Carbon	88.00
Ash	5.00
Sulphur	0.60

Southern Field.
(West Schuylkill)

	Per Cent
Moisture	3.00
Vol. Matter	2.00
Fixed Carbon	85.00
Ash	10.00
Sulphur	0.80

Analyses of Anthracite Sizes.

On following pages are some average analyses of the various anthracite sizes as they appear in Wadleigh's Coal Manual:

Sampled by the United States Bureau of Mines.

Size	Moisture	As Rec'd B. T. U.	B. T. U.	Dry Ash	No. of Analyses
Broken	3.87	12,782	13,928	11.11	12
Egg	4.60	12,658	13,268	11.30	4
Stove	3.81	12,585	13,084	12.05	19
Chestnut	4.80	12,365	12,988	12.48	6
Pea	3.85	12,150	12,637	15.25	119
Buck. No. 1	4.66	11,449	12,009	18.54	49
Buck. No. 2	7.56	11,365	12,295	16.77	18

Range of Analyses of Pennsylvania Anthracite Coal, as Shipped.

Size	Ash Per Ct.	Fixed Carbon Per Ct.	Volatile Matter Per Ct.	Moisture Per Ct.	Sulphur Per Ct.
Broken	7-10	81-84	4 to 6	1 to 2	0.7
Egg	8-11	80-83	4 to 6	1 to 2	0.7
Stove	9-12	79-81	4 to 6	1 to 2	0.7
Chestnut	10-13	77-80	4 to 6	3 to 4	0.7
Pea	13-15	76-78	4 to 6	3 to 4	0.7
Buck. No. 1	16-20	71-75	4 to 6	3 to 4	0.7
Buck. No. 2	18-22	69-73	4 to 6	3 to 4	0.7
Buck. No. 3	20-25	66-71	4 to 6	4 to 6	0.7

Anthracite Produced in 1923— By Regions.

	Shipments	Local Sales	Power	Total
LEHIGH:				
Breaker product	9,538,147	558,796	1,008,884	11,105,827
Washery product	521,744	3,383	19,363	544,490
Dredge product	94,725	.....	.....	94,725
	10,154,616	562,179	1,028,247	11,745,042
SCHUYLKILL:				
Breaker product	20,377,383	554,910	2,626,295	23,558,588
Washery product	1,552,511	186	59,537	1,612,234
Dredge product	284,682	462,231	6,370	753,283
	22,214,576	1,017,327	2,692,202	25,924,105
WYOMING:				
Breaker product	39,092,074	1,308,115	3,110,108	43,510,297
Washery product	1,680,032	4,852	174,518	1,859,402
Dredge product	5,592	.....	300	5,892
	40,777,698	1,312,967	3,284,926	45,375,591
SULLIVAN COUNTY:				
Breaker product	280,822	7,841	5,000	293,663
Total breaker product	69,288,426	2,429,662	6,750,287	78,468,375
Total washery product	3,754,287	8,421	253,418	4,016,126
Total dredge product	384,999	462,231	6,670	853,900
GRAND TOTAL	73,427,712	2,900,314	7,010,375	83,338,401

Population Growing in Anthracite Consuming States.

When the pressure of demand for anthracite became pronounced in 1917 and 1918 various statements were made with reference to increased population in the Northeastern section of our country being responsible for a considerable part of the demand. In fact, it was asserted on the authority of the office of the Provost Marshal General in connection with the application of the selective draft law that there had been an increase in population of nearly 5,000,000 in the states of the Northeast where large war industries were located, as compared with the figures of 1910.

A more substantial basis is given to the assertions made by the census figures of 1920 which give the actualities of this record. And, while the number is nearer four million than five it will be seen that the states of the Northeastern section where anthracite is particularly the domestic fuel, have grown much in the last ten years and as is well known the increase in population is largely centered in the industrial cities and towns, the agricultural districts and smaller communities remaining practically at a standstill, if indeed they have not shown a decrease in population.

	1910.	1920.		1910.	1920.
Connecticut	1,114,756	1,380,385	New Jersey.....	2,537,167	3,155,374
Delaware	202,322	223,003	New York	9,113,614	10,384,144
Dist. of Columbia.	331,069	437,571	Pennsylvania	7,665,111	8,720,159
Maine	742,371	767,996	Rhode Island.....	595,986	604,379
Maryland	1,295,346	1,449,610	Vermont	355,956	352,421
Massachusetts ...	3,693,310	3,851,615	Totals	28,977,580	31,771,740
New Hampshire..	430,572	443,083	Total increase.....		3,694,160

The gain in population adds to use of anthracite despite inroads.

Anthracite Coal Shipments by Regions.

The shipments of anthracite coal from the various regions for years 1908-1923 has been as follows:

	Schuylkill	Lehigh	Wyoming	Total
1908	18,006,464	7,786,255	38,372,295	64,665,014
1909	16,864,147	7,532,271	37,573,467	61,969,885
1910	17,845,020	8,627,539	38,433,227	64,905,786
1911	19,375,369	9,775,018	40,805,912	69,954,299
1912	18,013,406	8,571,861	37,025,311	63,610,578
1913	19,338,870	9,342,583	40,388,175	69,069,628
1914	18,494,687	9,087,111	40,760,803	68,342,601
1915	18,039,888	10,304,652	39,539,236	67,883,776
1916	19,888,310	9,654,000	37,834,054	67,376,364
1917	22,715,086	11,255,490	43,162,729	77,133,305
1918	22,755,365	11,511,760	42,382,793	76,649,918
1919	19,899,519	10,266,479	36,689,313	66,855,311
1920	21,517,211	9,860,611	37,249,303	68,627,125
1921	20,184,799	8,910,348	38,522,566	67,617,713
1922	12,963,674	5,565,532	22,286,566	40,875,772
1923	22,214,576	10,154,616	40,777,698	73,146,890

TRADE NAMES OF ANTHRACITE COAL

The geological field, character of coal, mining districts and trade names of coal coming from each district are given below:

Geological Field	Character of Coal	Mining District	Trade District
		1 Carbondale	Wyoming
	Free-Burning White-ash	2 Scranton	"
Northern	Wyoming Red-ash	3 Pittston	"
		4 Wilkes-Barre	"
		5 Plymouth	"
		6 Green Mountain	Lehigh
Eastern Middle...	Hard White-ash	7 Black Creek	"
	Lehigh Red-ash	8 Hazleton	"
		9 Beaver Meadow	"
	Hard White-ash	10 East Mahanoy	Schuylkill
Western Middle...	Free-Burning White-ash.	11 West Mahanoy	"
	Shamokin		
	Trevorton	12 Shamokin	"
	Schuylkill Red-ash.....	13 Panther Creek	Lehigh
Southern	Hard White-ash	14 East Schuylkill.....	Schuylkill
	Free-Burning White-ash.	15 West Schuylkill....	"
	Lorberry Red-ash	16 Lorberry	"
	Lykens Valley Red-ash..	17 Lykens Valley	"

Per Capita Consumption.

Figures obtained from Government sources by the Central Pennsylvania Coal Producers' Association show that the per capita consumption of bituminous coal in the United States reached its maximum in 1917 and has declined since then. In the following year, 1918, this dropped to 5.1 tons, and the crude oil consumed for the latter period was 4.0 barrels.

During 1923, a period of great commercial activity, the per capita consumption of bituminous coal dropped to 4.4 tons, while consumption of crude oil increased to 6.0 barrels per capita, a reduction of 13.7% in the consumption of bituminous coal and an increase of 50% in the consumption of crude oil.

Details are shown below:

	Per Capita			Per Capita	
Year	Net Tons Bituminous Coal	Barrels Crude Petroleum	Year	Net Tons Bituminous Coal	Barrels Crude Petroleum
1917.....	5.2		1921.....	3.7	4.9
1918.....	5.1	4.0	1922.....	3.9	5.4
1919.....	4.6	4.0	1923.....	4.4	6.0*
1920.....	4.9	5.0	*Estimated.		

While use of coal has decreased 15 per cent, use of oil has increased 50 per cent.

Shipments of Anthracite According to Sizes, 1912-'23.

Shipments of anthracite coal by sizes for 12 years were:

Size	1912	1913	1914	1915	1916	1917
Lump	418,601	362,714	180,516	115,348	119,562	154,597
Broken	3,743,269	3,489,779	3,547,117	3,349,933	3,543,326	4,531,889
Egg	8,883,118	8,928,792	8,718,809	8,117,340	8,487,032	10,431,455
Stove	11,756,604	13,841,777	14,505,502	14,061,069	13,598,796	14,324,505
Chestnut ...	14,497,370	17,065,632	16,224,892	15,570,013	14,998,499	17,753,449
Pea	7,138,141	8,142,571	8,277,619	8,210,669	7,520,804	6,824,003
Buckwheat .	8,697,584	9,504,161	9,459,788	9,322,533	9,569,817	11,659,176
Smaller* ...	9,532,562	9,422,886	9,549,803	9,919,552	9,663,527	11,810,969
Total gr. tons	64,667,249	70,758,312	70,464,046	68,666,456	67,501,363	77,490,043

Size	1918	1919	1920	1921	1922	1923
Lump	133,529	26,855	33,324	12,330	4,151	7,082
Broken	4,750,320	2,861,611	3,301,578	2,474,690	1,639,274	3,476,582
Egg	10,279,963	9,701,195	9,941,584	10,239,859	5,487,031	10,962,994
Stove	13,422,950	13,354,488	12,380,630	14,687,638	8,193,307	13,677,384
Chestnut ...	17,408,141	17,405,402	17,327,540	18,636,682	10,085,960	18,355,255
Pea	6,471,381	6,237,398	5,457,588	5,865,379	3,278,136	5,928,618
Buckwheat	10,800,796	8,574,852	9,167,934	9,349,009	5,537,595	9,641,571
Smaller* ...	13,454,077	4,810,494	11,000,585	8,288,976	6,848,384	11,378,226
Total gr. tons	76,721,157	62,972,295	68,610,763	69,554,563	41,073,838	73,427,712

* Includes rice, barley, boiler, culm, buck No. 4, screenings, etc., and coal from Sullivan County.

TIDEWATER (PIERS) BITUMINOUS PRICES, 1924

We give below prices prevailing on leading brands of coal in the New York market during the past year, based upon information obtained from other reliable sources of information. Figures are for gross tons.

New York

	Jan.	Feb.	Mar.	Apr.	May	June
Pool 9...	$5.00-$5.25	$4.90-$5.25	$4.75-$5.25	$4.50-$5.00	$4.85-$5.00	$4.85-$5.00
10...	4.70- 4.90	4.75- 5.00	4.60- 5.00	4.25- 4.75	4.65- 4.75	4.60- 4.75
11...	4.60- 4.70	4.50- 4.75	4.50- 4.75	4.00- 4.50	4.40- 4.50	4.40- 4.50

	July	Aug.	Sept.	Oct.	Nov.	Dec.
Pool 9...	4.60- 5.00	5.25- 5.40	4.60- 5.00	4.80- 5.10	4.75- 5.00	4.75- 5.00
10...	4.50- 4.75	4.25- 4.50	4.50- 4.75	4.65- 4.80	4.50- 4.75	4.50- 4.75
11...	4.25- 4.50	4.00- 4.15	4.25- 4.50	4.35- 4.50	4.40- 4.55	4.40- 4.50

Philadelphia

	Jan.	Feb.	Mar.	Apr.	May	June
Pool 9...	$4.90-$5.20	$4.90-$5.20	$4.90-$5.20	$4.80-$5.20	$4.70-$5.05	$4.70-$5.05
10...	4.50- 4.90	4.50- 4.90	4.60- 5.00	4.55- 4.90	4.45- 4.80	4.45- 4.80
11...	4.25- 4.60	4.25- 4.60	4.50- 4.75	4.35- 4.65	4.30- 4.55	4.30- 4.55

	July	Aug.	Sept.	Oct.	Nov.	Dec.
Pool 9...	4.70- 5.00	4.70- 5.00	4.90- 5.25	4.90- 5.25	4.90- 5.25	4.90- 5.25
10...	4.45- 4.70	4.45- 4.70	4.75- 4.95	4.45- 4.70	4.45- 4.70	4.45- 4.70
11...	4.30- 4.50	4.30- 4.50	4.50- 4.70	4.30- 4.50	4.30- 4.50	4.30- 4.50

STEADY DAYS IN ANTHRACITE

Private Initiative Fixed Price at Fair, Even Figure for a Decade.

In the midst of criticism of anthracite prices at the present time, it will be well to remember that for many years, while the reduced purchasing power of money was causing commodity prices to advance on a steadily increasing scale, anthracite prices were unchanged.

For nine years there was no change in the price of stove coal. Then there was an increase of 25 cents. The next year the anthracite tax law of 1913 added 10 cents. During the two following years there was no change.

So that in a period of 13 years the price increased only 35 cents. It was not until the country entered upon war conditions that any substantial increase occurred.

Reference to the details in the following material from an authentic source will be found useful:

Tidewater Prices, White Ash Anthracite.

Year	Broken	Egg	Stove	Nut
1902	$4.75	$5.00	$5.00	$5.00
1903	No change			
1904	No change			
1905	No change			
1906	No change			
1907	No change			
1908	No change			
1909	No change			
1910	No change			
1911	No change			5.25
1912	5.00	5.25	5.25	5.50
1913	Tax law added 10 cents			
1914	No change			
1915	No change			
1916	4.90	5.40	5.65	5.70
1917	6.40	6.30	6.55	6.65

At one time upwards of 95 per cent of the anthracite tonnage was sold at the above circular prices, the large transportation interests buying coal from individual operators under the so-called percentage contracts. These were, after extended litigation, declared illegal by the U. S. Supreme Court in all except a very few instances where special terms prevailed. But, in view of the decision, even those contracts were allowed to lapse at date of expiration. As one reviews the situation it must be manifest that the public was being well served in regard to its hard coal supplies in the period 1902-1917.

Bituminous production in Pennsylvania slumped approximately 28 per cent, but the output in 1924 was heavier than in 1922, when 113,148,308 tons were produced, and heavier than in 1921, when the output aggregated 116,013,942 tons.

Anthracite Shipped in 1923 by Regions and Sizes.

The following returns transmitted by the United States Geological Survey show the actual shipments of ahtnracite in 1923. It will be noticed that the various amounts are shown in net tons instead of the customary gross tons used by the Anthracite Bureau of Information and the trade in general The Survey figures include 282,822 tons from Sullivan County, also 385,999 tons from river dredging.

Size	Lehigh region			Schuylkill region		
	Breakers	Washeries	Dredges	Breakers	Washeries	Dredges
Lump	.....	.....	.....	7,082	.....	.....
Broken	166,216	2,773	.....	716,682	3,047	.....
Egg	1,405,101	16,305	.....	2,554,068	7,295	.....
Stove	1,697,987	12,626	.....	3,661,617	17,541	.....
Chestnut	2,425,775	46,856	.....	4,756,618	259,318	206
Pea	912,632	32,985	291	2,038,969	191,355	236
Buckwheat No. 1	1,367,965	70,577	433	3,439,731	343,209	1,261
Buckwheat No. 2, Rice and Birdseye	700,958	80,620	.....	1,296,794	309,528	5,600
Buckwheat No. 3 and Barley.	731,739	219,449	59,876	1,735,007	411,960	156,428
Boiler	14,426	.....	34,125	2,710	14	12,043
Other *b*	115,348	39,553	.....	168,105	9,244	108,908
Total	9,538,147	521,744	94,725	20,377,383	1,552,511	284,682

Size	Wyoming region			Sullivan Co.		
	Breakers	Washeries	Dredges	Breakers	Total	% of Total
Lump	.....	.....	....	.....	7,082	0.0
Broken	2,565,411	8,367	....	14,086	3,476,582	4.7
Egg	6,912,353	39,918	....	27,954	10,962,994	14.9
Stove	8,161,395	80,074	....	46,144	13,677,384	18.6
Chestnut	10,472,092	333,278	....	61,112	a18,355,255	25.0
Pea	2,548,984	157,417	1,419	44,330	5,928,618	8.1
Buckwheat No. 1	4,133,733	284,328	334	.....	9,641,571	13.2
Buckwheat No. 2, Rice and Barley	2,560,927	417,002	....	.....	5,371,429	7.3
Buckwheat No. 3 and Barley..	1,507,814	295,312	....	.....	5,117,585	7.0
Boiler	85,529	17,554	3,839	.....	170,240	.2
Other *b*	143,836	46,782	....	87,196	718,972	1.0
Total	39,092,074	1,680,032	5,592	280,822	73,427,712	100.0

(a) Includes 2,328,843 tons of "range" coal.
(b) Includes culm, No. 4 buckwheat, silt, and run-of-mine coal.

One feature of the 1924 record stands out prominently. It is the unusually large difference between the maximum and the minimum weekly soft coal output for different parts of the year. From an average weekly production of 11,598,000 tons during the five weeks ended February 9th, the output declined to an average of 6,827,000 tons during the five weeks ended May 3rd. The average weekly output for the year was approximately 9,230,000 tons.

Girard Estate Production and Shipments.

The 1923 report of James Archbald, mining engineer and agent of the Girard Estate, shows that, counting pea as small coal, the shipments of large and small coal from the operations on the Girard Estate have been as follows:

	Large Coal.		Small Coal.	
	Tons.	Per Cent.	Tons.	Per Cent.
1924	1,614,712	57.51	1,193,039	42.49
1923	1,958,306	54.70	1,621,995	45.30
1922	1,108,794	54.08	941,464	45.92
1921	1,753,721	58.78	1,230,002	41.22
1920	1,785,578	55.26	1,445,502	44.74
1915	1,145,941	58.42	815,622	41.58
1910	1,096,574	58.37	782,056	41.63
1905	1,068,540	58.62	754,358	41.38
1900	627,093	57.41	465,263	42.59
1895	1,056,653	70.95	432,705	29.05
1890	1,042,215	79.37	270,881	20.63
1885	919,138	80.55	221,996	19.45
1880	1,104,097	88.21	147,588	11.79
1875	644,557	91.48	59,987	8.52
1870	455,168	96.43	16,830	3.57
1865	240,466	100.00	.....	.....
1863	40,789	100.00	.....	.....

Excluding the coal reclaimed from culm banks, the proportions of large and small coal have been as follows:

	Large Coal.		Small Coal.	
	Tons.	Per Cent.	Tons.	Per Cent.
1924	1,554,995	61.23	984,538	38.77
1923	1,775,369	61.01	1,134,356	38.99
1922	1,023,936	60.03	681,714	39.97
1921	1,666,601	63.40	962,035	36.60
1920	1,610,518	63,63	920,507	36.37
1915	1,125,503	61.46	705,652	38.54
1910	1,080,600	63.61	618,188	36.39
1905	1,054,403	62.99	619,588	37.01
1900	625,422	63.31	362,227	36.69
1897	852,895	70.71	353,213	29.29

Tonnages for 1900 and 1922 curtailed by strikes.

Coal Reclaimed from Culm Banks.

Year.	Tons.	Cwt.	Per Cent of Total Shipment.	Year	Tons.	Cwt.	Per Cent of Total Shipment.
1889–1900	194,023	16	1.22	1918	632,414	08	18.85
1901–1910	2,178,147	02	13.39	1919	498,973	10	18.43
1913	204,152	08	10.32	1920	700,055	03	21.67
1914	168,187	..	8.84	1921	355,086	19	11.90
1915	130,408	08	6.65	1922	344,607	19	16.81
1916	298,709	10	10.99	1923	670,576	10	18.73
1917	532,979	16	16.29	1924	268,217	19	9.55

GREAT GROWTH OF TRAFFIC

Railroad Freight Business Makes Enormous Strides in Three Decades.

An interesting article by E. F. Carry, president of the Pullman Company, illustrates in the following tabulation the extent to which railroad traffic in the United States has increased in recent times.

TRAFFIC CHANGES IN 30 YEARS

	1890	1920	Increase
Population	62,947,714	105,710,620	68%
Total revenue ton miles handled (in millions)	76,207	413,674	443%
Ton miles of revenue freight per inhabitant per annum	1,200	4,000	233%
Ratio increase in ton miles per inhabitant to increase in total number of population	1	3 1–3	

Further information is given with reference to the number of freight cars owned and the following details of 1902 and 1921 equipment and mileage are presented:

	1902	1921	Increase
Total number of freight cars owned	1,546,101	2,378,682	54%
Aggregate carrying capacity	43,445,438	101,093,985	133%
Unit carrying capacity	28.1 tons	42.5 tons	51%
Ton-mile traffic handled (millions)	157,289	309,443	97%
Miles of yard and side tracks	58,221	100,705	73%

The point is made that if the traffic demands had been met by the seemingly simple process of adding locomotives and cars, without any attempt at changing their design, it would have been necessary to add more than two million cars, which, with the necessary locomotives, would have resulted in jamming the side tracks and yard tracks to such an extent that congestion would have been most serious.

When considering such statistics as these, one realizes that despite all competition from waterways and motor trucks, and in some cases electric railways, the business of the carriers has increased to a very notable extent.

Timber Used in Anthracite Mines.

The anthracite mines of Pennsylvania used 567,000,000 board feet of lumber, or about seven board feet for every ton of hard coal mined, in 1923, according to the State Department of Forests and Waters.

The kinds of timber used are almost as varied as the species themselves, for everything from gray birch and Carolina poplar to white oak has been noticed in use for props and lagging. Prop timber noticed in an average anthracite mine comprised the following species: White oak, red oak, chestnut, maple, pitch pine, hemlock, spruce, Douglas fir, cherry, beech and poplar.

Only a few companies are placing restrictions on the kinds of timber which are used for props, but one large company now confines the species which are used for prop timber to white oak, hard maple, pitch pine, hemlock and beech. Shipments of hemlock and beech comprise only 10 per cent each of the aggregate.

CANADIAN COAL MARKET

Importance of This Outlet to Ohio, West Virginia and Kentucky.

In discussing the Canadian market for American coal and the difficulty which the Fairmont operators are encountering in trying to get a share of that business George S. Brackett, secretary of the Northern West Virginia Coal Operators' Association, says:

"The growth of the exports of bituminous coal into Canada has been great in the last twenty years. Due credit must be given to the railroads and industries of Canada for contributing to the development of the western coal fields of the United States. By the opening up of this market a considerable contribution was made to the success of the American coal industry.

"In 1905 approximately 4,700,000 tons of bituminous coal alone crossed the northern boundary of the United States into Canada; in 1923 this amount had increased to 15,300,000 tons, an increase of nearly 250 per cent.

"By far the largest proportion of this coal moves through the lake ports and all-rail via Port Huron on the St. Lawrence River. In 1923, 8,000,000 tons moved by these routes.

Principal Shipping Routes.

"Three and one-half million tons, in this same year, crossed the Niagara River through the Buffalo gateway, and 3,200,000 tons by way of Rochester and the St. Lawrence River routes. The remaining tonnage, barely 200,000 tons, crossed the line in the Dakota and Duluth section. For the smaller total tonnage of the previous years, back to 1915, the same proportionate movement was maintained through the several routes.

"There are no definite records available of the origin of the coal, except in a very general way. A considerable percentage of the coal is for the Canadian railroads, which require for their operation the better quality American coals in preference to the lower grade Canadian coal; and like the American railroads they demand the coal at the cheapest delivered cost. Cost of production and carrying charges are the two main contributing factors.

Where the Tonnage Comes From.

"Take the route by which the majority of the coal moves as the first illustration, namely, through the lake ports and the St. Clair River all-rail route. The lake port coal freight rates have been recently under attack before the Interstate Commerce Commission and the statistics filed in this case demonstrated conclusively: First, the remarkable growth of the southern West Virginia and eastern Kentucky coals in the lake traffic; second, the stable business of the northeastern Ohio and western Pennsylvania, moving at the lowest freight rates and, third, the gradual loss of tonnage originating in northern West Virginia.

"This latter region is only a very small contributor to this most popular route into the Canadian markets. Likewise the all-rail route via the St. Clair River is open to all the western Pennsylvania, West Virginia and eastern Kentucky coal fields at equal freight rates, uniformly 50 cents higher than the Ohio mines.

"It is well known to all coal men that the race for this business lies between the Ohio coals and the southern coals; the former with a decided freight rate advantage, and the latter with the highest quality and the most moderate cost of

production. Fairmont and Pittsburgh are almost forgotten by the Canadian consumers reached by this line of movement.

The Buffalo Gateway.

"Through Buffalo moves the next largest volume of coal, and fortunately for the northern West Virginia district, the Ohio and southern West Virginia producing territories do not have access to Buffalo. There is no route open for these latter coals. Again only very general information is available as to the origin of the coal feeding this route; but this, with the freight rate adjustment tells an undisputed story.

"The closest fields, Butler and Mercer counties of Pennsylvania, take the lowest freight rate. Pittsburgh is a step up, then Connellsville, then the Monongahela Railway in West Virginia, and, highest of all, the Baltimore & Ohio RR. coal in the Fairmont field. All these coals are competitive in quality, and the carrying charges influence the business.

"The Fairmont field takes only that portion of this tonnage that can be gotten by equalizing the freight with the closer mines and absorbing this carrying differential. Coal operators on the Baltimore & Ohio have succeeded in placing only occasional car-loads on this business.

"Finally, the Rochester and St. Lawrence gateway, with an annual tonnage of 3,200,000 tons. The writer of this article has noticed in the past few years an occasional shipment of a few cars; there is no regular movement. The ultimate destination is closer the Canadian coal fields, and only those American producers having a correspondingly advantageous position can compete—Blossburg, northwest Pennsylvania and Central Pennsylvania.

"Thus, it will be seen, that Canada as well as New England (the latter analyzed in a previous statement) are two large markets for American coal—aggregating 36,000,000 tons annually—which, despite the fact that Fairmont is one of the fields in which its position should permit it to participate, its coal is hardly a factor in the traffic."

Baltimore Coal Exports and Foreign Bunkers.

The following tabulation shows bituminous export shipments by months during 1923 and 1924:

Month	Anthracite		Bituminous		Coke		Bunkers	
	1923	1924	1923	1924	1923	1924	1923	1924
January	....	....	511	70,959	....	5,144	13,688	19,856
February	....	....	6,346	59,005	548	5,025	9,990	18,495
March	....	....	63,389	48,882	1,819	2,887	18,676	15,182
April	....	....	234,122	84,402	56,476	4,033	31,465	18,995
May	....	....	271,113	32,222	69,875	4,018	47,385	24,152
June	....	....	340,361	48,048	6,050	3,911	44,991	12,158
July	2	....	195,296	89,737	....	....	37,599	17,718
August	....	....	128,033	23,290	10,117	....	20,728	14,761
September	1,209	....	59,433	42,172	11,587	4,018	20,570	15,111
October	1,024	....	47,744	28,622	5,375	4,976	14,884	14,896
November	7,067	....	66,759	17,394	4,050	....	9,601	11,531
December	....	....	6,248	38,909	4,203	....	15,672	20,968
Total	9,302	....	1,379,355	583,642	170,091	34,012	285,249	203,823

BITUMINOUS DUMPED AT LAKE ERIE PORTS

Details of Business Accomplished in Water Movement to Northwest—Toledo the Greatest Port.

We show below bituminous tonnage dumped at railroad piers at Lake Erie ports in 1923 and 1924.

Ports	Railroads	(In Net Tons) 1923 Cargo	1923 Fuel	1923 Total	(In Net Tons) 1924 Cargo	1924 Fuel	1924 Total
Toledo	H. V.	5,026,533	151,965	5,178,498	6,714,573	199,104	6,913,677
	Big Four	.....	.....	.....	57,298	138	57,436
	N. Y. C.	1,182,193	36,966	1,219,159	145,012	5,425	150,437
	B. & O.	2,891,967	84,402	2,976,369	2,256,187	69,919	2,326,106
Sandusky	Penna.	3,008,096	95,726	3,103,822	4,205,493	126,145	4,331,638
Huron	W.&L.E.	1,481,428	58,439	1,539,867	800,037	36,933	836,970
Lorain	B. & O.	3,667,957	196,569	3,864,526	2,227,761	158,610	2,386,371
Cleveland	Penna.	1,870,527	201,470	2,071,997	1,414,865	176,709	1,591,574
	Erie	739,025	31,920	770,945	327,720	11,336	339,056
Fairport	B. & O.	912,131	82,236	994,367	556,243	84,556	640,799
Ashtabula	N. Y. C.	3,380,040	255,746	3,635,786	871,569	113,659	985,228
	Penna.	2,147,144	94,482	2,241,626	1,195,466	79,607	1,275,073
Conneaut	B.& L.E.	2,783,640	242,057	3,025,697	1,514,457	198,039	1,712,496
Erie	Penna.	738,103	96,532	834,635	688,310	87,381	775,691
Totals		29,828,784	1,628,510	31,457,284	22,974,991	1,347,561	24,322,552

Shipments Month by Month.

Total tonnage, cargo and bunker, by months, was as follows:

Month	1919	1920	1921	1922	1923	1924
January	.....	.....	10,600	.....	.....	18,396
February	.....	.....	103,377	9,277	5,555	.....
March	.....	.....	235,238	204,040	69,626	369
April	1,133,203	329,202	939,945	621,236	1,077,368	930,696
May	3,800,837	1,321,020	3,665,145	1,341,392	4,005,051	2,609,593
June	4,270,462	2,221,210	4,795,383	1,535,877	4,941,843	2,932,793
July	3,983,521	2,860,366	3,669,131	832,697	4,910,479	3,621,665
August	2,820,280	4,593,781	3,040,452	616,762	4,617,891	3,746,686
September	2,505,827	4,138,533	2,295,580	4,558,464	3,640,872	3,416,936
October	3,229,794	4,693,839	2,820,411	4,770,639	4,144,266	3,577,521
November	1,064,468	3,235,623	1,526,630	4,007,995	3,735,874	3,088,086
December	.....	268,500	69,557	524,377	308,519	421,297
Total	22,750,392	23,667,138	23,171,449	19,351,323	31,457,294	24,322,552

Shipments by Ports.

Port	1919	1920	1921	1922	1923	1924
Toledo	7,936,406	7,483,522	8,320,514	7,213,613	9,374,026	9,447,656
Sandusky	1,442,028	1,630,847	1,905,286	2,893,994	3,103,822	4,331,638
Huron	1,488,516	1,958,446	1,622,968	447,809	1,539,867	836,970
Lorain	2,871,450	3,488,182	2,649,329	1,927,543	3,864,526	2,386,371

Port	1919	1920	1921	1922	1923	1924
Cleveland	2,800,425	1,859,177	2,527,395	1,546,070	2,842,942	1,930,630
Fairport	29,646	.....	.....	.....	994,367	640,799
Ashtabula	3,873,791	3,959,855	3,566,315	3,368,728	5,877,412	2,260,301
Conneaut	1,382,719	2,446,960	1,494,805	1,681,509	3,025,697	1,712,496
Erie	925,311	849,039	1,084,839	272,057	834,635	775,691
Total	22,750,392	23,667,138	23,171,449	19,351,323	31,457,294	24,322,552

In December, 1923, after close of navigation, 187,000 tons were loaded into vessels and forwarded from Lake Erie ports in 1924.

Destination of Cargo Coal Shipped from Lake Erie Ports.

Destination	1922		1923		1924	
American Ports:	Net tons	Per cent	Net tons	Per cent	Net tons	Per cent
Lake Superior	6,700,000	36.2	13,808,000	46.6	9,539,000	41.3
Sault Ste. Marie and river	676,000	3.6	697,000	2.3	469,000	2.0
Lake Huron	198,000	1.1	310,000	1.0	311,000	1.3
Lake Michigan	5,486,000	29.6	8,088,000	27.3	6,551,000	28.3
Port Huron and Detroit R.	613,000	3.3	768,000	2.6	619,000	2.7
Lake Erie	1,153,000	6.2	501,000	1.7	734,000	3.2
Total American	14,826,000	80.0	24,172,000	81.5	18,223,000	78.8
Canadian Ports:						
Lake Superior	1,902,000	10.3	2,292,000	7.7	2,014,000	8.7
Sault Ste. Marie and river	414,000	2.2	871,000	3.0	789,000	3.4
Lake Huron-Georgian Bay	574,000	3.1	980,000	3.3	645,000	2.8
Port Huron and Detroit R.	500,000	2.7	576,000	1.9	548,000	2.4
Lake Erie	92,000	0.5	237,000	0.8	398,000	1.7
Lake Ont. & St. Lawrence R.	214,000	1.2	519,000	1.8	507,000	2.2
Total Canadian	3,696,000	20.0	5,475,000	18.5	4,901,000	21.2
Grand total	18,522,000	100.0	29,647,000	100.0	23,124,000	100.0

Exports of Bituminous Coal from United States.

Exports of bituminous coal (including shipments to Canada) during 1924 and five previous years were:

Month	1919	1920	1921	1922	1923	1924
January	1,207,634	1,249,167	2,248,448	649,913	1,092,084	1,045,587
February	683,709	1,168,806	1,258,670	813,587	805,973	1,262,838
March	554,037	1,500,540	1,151,840	1,187,313	1,219,970	1,111,752
April	811,128	2,431,639	1,453,027	714,995	1,384,879	942,638
May	1,429,612	2,400,821	2,500,374	399,551	2,249,001	1,231,740
June	2,179,201	3,132,253	3,314,513	540,550	2,418,769	1,513,899
July	2,027,206	3,556,802	2,649,989	366,289	2,278,241	1,630,849
August	2,356,046	4,108,561	1,695,090	425,530	2,117,084	1,392,862
September	2,721,897	4,011,424	1,211,610	1,175,007	1,768,620	1,502,829
October	2,934,686	4,580,169	1,328,513	1,729,425	1,488,887	1,534,459
November	724,650	3,567,136	1,078,767	1,618,037	1,253,445	974,346
December	341,064	2,682,715	770,092	1,468,917	1,078,028	1,090,486
Totals	17,003,012	34,390,033	20,661,033	11,083,112	19,154,981	15,234,285

It will be seen that 1920 was far and away the greatest export year.

Tidewater Bituminous Shipments, 1920-1924.

Shipments of bituminous coal at the ports of New York, Philadelphia, Baltimore, Hampton Roads and Charleston aggregated 33,216,754 net tons in 1924, according to the United States Geological Survey.

Compared with dumpings in 1923, this was a decrease of approximately 11 per cent. With the single exception of 1922, when the tidewater trade was curtailed by the miners' strike, the record for 1924 was the lowest in the last eight years.

Of the total dumpings in 1924, 18,094,078 tons, or 54 per cent, was handled at Hampton Roads. Compared with 1923, this was an increase of 709,594 tons, or four per cent. Relatively, the dumpings at Hampton Roads showed an increase over 1923 of eight per cent. Dumpings at New York were next in importance and totaled slightly over 9,000,000 tons, as against 10,800,000 in 1923.

Shipments during 1924 from the five ports named above, divided according to destination, are shown in the following table:

Destination	1924	1923	1922	1921	1920
New England	11,488,230	13,374,320	10,892,460	8,858,631	10,456,446
Exports	4,767,888	5,121,654	1,613,390	9,632,688	21,778,209
Bunker	4,961,330	5,442,123	4,576,039	8,135,342	9,171,068
Inside capes	3,752,868	4,459,659	3,331,706	3,251,114	3,410,299
Other tonnage	8,246,438	9,122,751	8,058,915	7,445,338	8,968,160
Total	33,216,754	37,520,507	28,472,510	37,323,113	53,784,182

Vessel Rates on Great Lakes.

Contract coal rates from Lake Erie ports to Lake Superior and Lake Michigan ports during several years were:

Year	Lake Superior Ports	Lake Mich. Ports	Year	Lake Superior Ports	Lake Mich. Ports	Year	Lake Superior Ports	Lake Mich. Ports
1900	50c	60c	1907	30c	40c	1914	30c	30c
1901	35c	50c	1908	30c	40c	1915	30c	30c
1902	35c	45c	1909	30c	..	1916	30c	30c
1903	40c	50c	1910	30c	35c	1917	42.5c	50c
1904	35c	45c	1911	30c	30c	1918	48c	55c
1905	30c	40c	1912	30c	30c			
1906	30c	40c	1913	30c	35c			

Rates to certain specified ports were as follows:

	Green Bay, Sheboygan, Escanaba, Manitowoc		Milwaukee, Waukegon, Menominee	Ind. Harbor, Gary By-products at So. Chicago	Other So. Chicago Docks	Racine	Chicago
1919	42.5c	42.5c	47.5c	47.5c	52.5c	57.5c	60c
1920	50c	55c	60c	60c	..	65c	65c
1921	50c	55c	60c	60c	..	65c	65c
1922	40c	55c	55c	55c	..	65c	65c
1923	45c	50c	55c	55c	..	65c	65c
1924	40c	45c	50c	50c	..	65c	65c

NUMBER AND CLASSIFICATIONS OF COAL MINES

More Than Half Small Producers with Tonnage Only 2.6% of Total—Nearly Half the Tonnage Produced by 748 Mines.

The Geological Survey has just issued a statement showing the number and annual output of the bituminous coal mines of the United States in 1923, by classes.

Total number of mines is given as 11,622, of which more than one-half—6,021 to be exact—are small operations producing less than 10,000 tons a year. Most of them are wagon mines, and their combined tonnage was only 2.6 per cent. of the total bituminous output for 1923.

Of the remaining mines, 2,743 produced more than 10,000 and less than 50,000 tons each. Their aggregate production was 12.2 per cent. of the total.

There were 1,175 mines producing between 50,000 and 100,000 tons and turning out 14.9 per cent. of all the soft coal mined in the country last year.

Operations in the 100,000-200,000 ton class numbered 935 and produced 23.2 per cent of the country's total.

The largest class of producers, those with a tonnage of over 200,000 annually, were only 748 in number, but they contributed 47.1 per cent. of the bituminous coal output of the United States in 1923.

Details by States are shown in the following tabulation:

State	Class 1 producing over 200,000 tons			Class 2 producing 100,000-200,000 tons			Class 3 producing 50,000-100,000 tons		
	Number	Per cent of total mines	Per cent of State output	Number	Per cent of total mines	Per cent of State output	Number	Per cent of total mines	Per cent of State output
Alabama	24	7.6	42.5	38	12.1	25.2	49	15.5	16.0
Arkansas	..	...	...	1	0.7	9.6	4	2.7	21.4
Colorado	15	5.9	37.6	19	7.5	25.6	31	12.3	21.1
Georgia	..	...	...	...	...	...	...	...	...
Illinois	134	21.4	74.8	82	13.1	15.2	64	10.2	6.1
Indiana	48	11.9	59.2	34	8.4	18.4	45	11.2	13.1
Iowa	4	2.4	22.2	11	6.7	26.3	19	11.5	24.6
Kansas	..	...	...	8	2.7	28.5	23	7.7	43.1
Kentucky	36	2.9	25.8	110	8.7	33.8	132	10.5	21.6
Maryland	..	...	...	3	2.0	16.5	12	8.2	37.1
Michigan	2	14.3	40.8	3	21.4	30.3	2	14.3	14.3
Missouri	1	0.4	9.1	4	1.7	14.5	18	7.9	35.9
Montana	4	6.5	64.0	3	4.8	13.0	5	8.1	12.1
New Mexico	2	3.1	20.8	14	21.5	58.3	3	4.6	7.7
North Dakota	1	0.7	16.3	1	0.6	8.2	3	2.1	15.1
Ohio	58	4.7	40.6	84	6.8	29.1	76	6.2	13.4

Oklahoma	1	0.6	8.4	3	1.8	17.1	9	5.4	23.5
Pennsylvania	247	6.8	53.9	234	6.4	19.2	287	7.9	12.0
Tennessee	3	1.3	13.1	11	4.7	24.1	24	10.4	28.5
Texas	..	...	...	...	...	...	9	20.5	39.2
Utah	10	26.3	60.7	8	21.1	27.2	6	15.8	10.4
Virginia	19	9.7	59.7	12	6.2	15.5	20	10.2	12.1
Washington	4	7.0	36.6	8	14.0	41.3	4	7.1	8.8
West Virginia	122	6.8	34.5	223	12.4	28.4	318	17.7	21.0
Wyoming	13	19.4	46.9	21	31.3	40.7	12	17.9	10.5
Grand Total	748	6.4	47.1	935	8.1	23.2	1,175	10.1	14.9

State	Class 4 producing 10,000-50,000 tons			Class 5 producing less than 10,000 tons			Total all classes	
	Number	Per cent of total mines	Per cent of State output	Number	Per cent of total mines	Per cent of State output	Number of mines	State output
Alabama	108	34.3	14.8	96	30.5	1.5	315	20,458,000
Alaska, Calif., Idaho and Ore.	4	23.5	85.0	13	76.5	15.0	17	140,000
Arkansas	29	19.9	48.2	112	76.7	20.8	146	1,297,000
Colorado	49	19.4	12.4	139	54.9	3.3	253	10,346,000
Georgia	1	33.3	95.6	2	66.7	4.4	3	76,000
Illinois	98	15.7	3.0	247	39.6	0.9	625	79,310,000
Indiana	72	17.8	7.3	205	50.7	2.0	404	26,229,000
Iowa	51	30.9	22.7	80	49.5	4.2	165	5,711,000
Kansas	35	11.8	19.4	231	77.8	9.0	297	4,036,000
Kentucky	267	21.3	16.1	711	56.6	2.7	1,256	44,777,000
Maryland	32	21.9	35.9	99	67.9	10.5	146	2,286,000
Michigan	5	35.7	14.2	2	14.3	0.4	14	1,172,000
Missouri	42	18.3	28.9	164	71.7	11.6	229	3,403,000
Montana	9	14.5	7.7	41	66.1	3.2	62	3,148,000
New Mexico	12	18.5	11.6	34	52.3	1.6	65	2,915,000
North Carolina	2	100.0	100.0	...	...	...	2	36,000
North Dakota	25	17.4	41.4	114	79.2	19.0	144	1,386,000
Ohio	223	18.1	12.8	792	64.2	4.1	1,233	40,546,000
Oklahoma	55	33.8	43.0	95	58.4	8.0	163	2,885,000
Pennsylvania	872	24.0	12.1	1,997	54.9	2.8	3,637	171,880,000
South Dakota	...	...	...	15	100.0	100.0	15	10,000
Tennessee	68	29.3	28.3	126	54.3	6.0	232	6,040,000
Texas	27	61.4	56.7	8	18.1	4.1	44	1,187,000

(*Continued on page 126*)

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Utah	2	5.2	1.0	12	31.6	0.7	38	4,720,000
Virginia	50	25.6	10.8	94	48.3	1.9	195	11,762,000
Washington	13	22.8	10.7	28	49.1	2.6	57	2,926,000
West Virginia	589	32.8	14.4	546	30.3	1.7	1,798	107,900,000
Wyoming	3	4.5	1.4	18	26.9	0.5	67	7,575,000

LABOR EMPLOYED IN COAL MINING.

Aside from Pennsylvania, West Virginia Has Greatest Number of Miners, Followed by Illinois, Kentucky and Ohio.

The following table shows the number of men employed in coal mining in the various States in 1922 and 1923, underground and on the surface, and the number of days worked:

	1922				1923			
State	Underground	Surface	Total	Days Wkd.	Underground	Surface	Total	Days Wkd.
Alabama	23,143	5,026	28,169	215	24,634	5,401	30,035	232
Arkansas	3,159	676	4,035	81	2,970	784	3,754	97
Colorado	11,069	2,437	13,506	191	11,178	2,162	13,340	174
Georgia	91	59	150	242	92	75	167	231
Illinois	86,296	10,040	96,336	120	89,094	10,620	99,714	158
Indiana	28,893	4,315	33,208	110	31,005	4,403	35,408	136
Iowa	11,846	1,011	12,857	131	10,506	942	11,448	181
Kansas	6,412	947	7,359	125	6,803	982	7,785	149
Kentucky	50,396	10,528	60,924	140	50,457	10,354	60,811	152
Maryland	3,226	529	3,755	101	3,174	551	3,725	178
Michigan	1,974	192	2,166	162	1,793	184	1,977	222
Missouri	7,218	1,532	8,750	113	5,552	1,400	6,952	155
Montana	3,098	537	3,635	140	2,964	547	3,511	179
New Mexico	3,222	779	4,001	216	3,547	548	4,095	216
N. Carolina	95	32	127	167	125	25	150	275
N. Dakota	1,136	512	1,648	175	1,140	481	1,621	182
Ohio	45,906	8,288	54,194	100	46,346	8,209	54,555	150
Oklahoma	6,624	1,204	7,828	114	6,030	1,100	7,130	133
Penn. (bit.)	159,451	29,387	188,838	154	166,568	28,413	194,981	213
S. Dakota	32	.....	32	138	34	.....	34	122
Tennessee	9,533	1,916	11,449	163	9,485	1,759	11,244	183
Texas	2,535	306	2,841	185	2,134	318	2,452	178
Utah	3,629	1,092	4,721	204	3,442	939	4,381	160
Virgina	10,857	2,542	13,399	198	13,651	2,469	14,120	212
Washington	3,604	877	4,481	194	3,460	846	4,306	213
W. Virgina	90,814	19,200	110,014	143	97,882	19,417	117,300	169
Wyoming	7,643	1,402	9,045	128	6,223	1,306	7,529	192
Total Bit.	582,409	105,549	687,958	142	598,480	104,337	702,817	179
Penn. Anth'ite	114,279	42,570	156,849	151	114,741	43,022	157,743	268
Grand totals	696,688	148,119	844,807	144	713,201	147,359	860,560	195

AVERAGE PRICE FOR COAL AT THE MINES

General Details and Figures by States Show Price of Tonnage for a Term of Years.

Anthracite and bituminous prices, at mines, for ten years have been as follows, according to figures furnished to the United States Geological Survey:

	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
Bituminous ...	$1.17	$1.13	$1.32	$2.26	$2.58	$2.49	$3.73	$2.89	$3.02	$2.68
Anthracite ...	2.07	2.07	2.30	2.85	3.40	4.14	4.84	5.00	5.01	5.43

These figures are based upon the total tonnage shipped of all grades, sizes and qualities, with the due proportion of each. And anthracite figures are reduced to net tons, as are also bituminous figures in cases where that coal is sold in gross tons:

Details by States appear below:

State	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
Alabama	$1.34	$1.28	$1.37	$2.27	$2.85	$2.96	$3.63	$3.08	$2.34	$2.52
Arkansas ...	1.72	1.79	1.92	2.56	3.67	3.70	4.55	4.37	4.14	4.01
California ...	2.85	2.54	2.12	2.30	2.70	3.38	4.23	4.66	3.87	3.94
Colorado	1.66	1.58	1.62	2.22	2.69	2.78	3.49	3.55	3.16	3.22
Georgia	1.44	1.72	1.79	2.53	3.59	3.71	5.00	2.14	4.06	4.32
Illinois	1.12	1.10	1.25	1.88	2.32	2.30	3.08	2.74	2.89	2.50
Indiana	1.10	1.10	1.27	1.99	2.29	2.22	3.16	2.57	2.85	2.48
Iowa	1.79	1.78	1.86	2.35	3.02	3.09	3.94	3.81	3.72	3.59
Kansas	1.64	1.66	1.78	2.31	2.91	3.05	3.85	3.85	3.66	3.22
Kentucky ...	1.02	1.01	1.19	2.17	2.55	2.46	4.10	2.69	3.02	2.54
Maryland ...	1.27	1.28	1.56	2.46	2.77	2.73	4.62	3.61	3.37	3.02
Michigan ...	1.99	2.05	2.25	3.22	3.83	3.88	4.93	4.87	5.05	4.73
Missouri	1.73	1.73	1.91	2.43	3.02	3.21	4.13	3.92	3.81	3.40
Montana	1.75	1.62	1.73	2.11	2.53	2.67	3.15	3.26	3.19	3.07
N. Mexico...	1.61	1.44	1.47	1.86	2.68	3.11	3.68	3.91	3.49	3.66
N. Dakota...	1.52	1.45	1.49	1.80	2.45	2.50	2.88	2.69	2.65	2.36
Ohio	1.13	1.08	1.33	2.48	2.58	2.22	3.80	2.65	3.23	2.43
Oklahoma ...	2.06	2.01	2.09	2.81	3.64	3.83	4.80	4.62	4.11	3.77
Oregon	2.78	2.84	2.68	3.38	2.81	3.40	4.47	*	*	*
Penn., bit....	1.07	1.06	1.30	2.44	2.59	2.42	3.73	2.78	3.11	2.75
S. Dakota...	1.73	1.55	2.03	2.90	2.80	3.17	3.60	2.81	2.84	2.41
Tennessee ...	1.14	1.13	1.23	2.19	2.83	2.77	4.00	3.35	2.89	2.73
Texas	1.69	1.65	1.56	1.77	2.63	2.69	3.75	2.64	2.32	1.82
Utah	1.59	1.58	1.62	2.07	2.71	2.76	3.22	3.35	3.14	2.89
Virginia	1.01	.98	1.06	2.00	2.51	2.55	3.96	3.06	2.58	2.76
Washington .	2.20	2.17	2.27	2.68	3.46	3.58	3.88	4.03	3.98	3.72
W. Virgina..	.99	.97	1.18	2.32	2.56	2.49	4.32	2.84	2.93	2.65
Wyoming ...	1.55	1.46	1.55	1.93	2.39	2.60	2.98	3.24	3.04	2.76
Total bit.	1.17	1.13	1.32	2.26	2.58	2.49	3.73	2.89	3.02	2.68
Penn., anth..	2.07	2.07	2.30	2.85	3.40	4.14	4.84	5.00	5.01	5.43
Gen. ave.	1.33	1.29	1.47	2.35	2.70	2.75	3.89	3.26	3.25	3.07

*Included in California.

MONTHLY BITUMINOUS PRODUCTION

High Monthly Record for Soft Coal Industry Was in October, 1919—Sixteen Million, in April, 1922, Low Point of Ten Years.

Bituminous coal produced in the United States, by months, 1915-1024 inclusive, in net tons, was:

Month	1915	1916	1917	1918	1919
January	37,190,000	46,596,000	47,967,000	42,227,000	42,193,000
February	29,321,000	45,187,000	41,353,000	43,777,000	32,103,000
March	31,801,000	43,827,000	47,869,000	48,113,000	34,293,000
April	29,968,000	33,628,000	41,854,000	46,041,000	32,712,000
May	30,938,000	38,804,000	47,086,000	50,443,000	38,186,000
June	33,957,000	37,742,000	46,824,000	51,138,000	37,685,000
July	35,573,000	38,113,000	46,292,000	54,971,000	43,425,000
August	38,161,000	42,696,000	47,372,000	55,114,000	43,613,000
September	40,964,000	42,098,000	45,108,000	51,183,000	48,209,000
October	44,198,000	44,807,000	48,337,000	52,300,000	57,200,000
November	44,737,000	44,927,000	47,690,000	43,895,000	19,006,000
December	45,814,000	44,098,000	44,037,000	40,184,000	37,235,000
Total	443,572,000	502,523,000	551,789,000	579,386,000	465,860,000

Month	1920	1921	1922	1923	1924
January	49,748,000	41,148,000	37,489,000	51,903,000	52,464,000
February	41,055,000	31,524,000	40,856,000	43,610,000	47,262,000
March	47,850,000	31,054,000	49,976,000	48,411,000	41,253,000
April	38,764,000	28,154,000	16,000,000	44,028,000	30,404,000
May	39,841,000	34,057,000	20,601,000	47,660,000	32,248,000
June	46,095,000	34,635,000	22,624,000	47,054,000	31,443,000
July	45,988,000	31,047,000	17,147,000	46,678,000	33,317,000
August	49,874,000	35,291,000	27,538,000	50,544,000	35,892,000
September	50,241,000	35,870,000	39,413,000	47,805,000	42,340,000
October	53,278,000	44,687,000	44,907,000	50,869,000	48,373,000
November	52,576,000	36,805,000	45,103,000	44,387,000	42,066,000
December	53,257,000	31,650,000	46,240,000	41,208,000	46,228,000
Total	558,667,000	415,922,000	407,894,000	564,157,000	483,280,000

Of course April, 1922, was a strike period, and so was November, 1919, and certain other months. The smallest normal month was April, 1921.

Central Canada Coal Imports.

Area	Anthracite		Bituminous	
	1923	1924	1923	1924
Quebec	105,544	70,200	219,650	148,105
Montreal	1,690,829	1,232,152	2,852,394	1,369,460
Ottawa	344,035	268,538	917,727	714,580
Kingston	141,378	106,511	239,740	180,753
Toronto	2,190,918	1,876,458	6,176,010	4,589,495
Windsor	387,280	347,014	3,211,000	2,400,069
Total	4,859,984	3,900,373	13,616,521	9,402,462

TONNAGE AND VALUE OF UNITED STATES COAL.

Worth Exceeds Two Billion Dollars and More Than Half Is Credited to Pennsylvania—South Dakota Output Valued at Only $25,000.

The most recent report of the United States Geological Survey gives this statement of the coal production of the United States in 1922 and 1923 by States, with value at the mines:

State	Quantity 1922	Value 1922	Quantity 1923	Value 1923
Alabama	18,324,740	$42,856,000	20,457,649	$51,624,000
Alaska	79,275	431,000	119,826	755,000
Arkansas	1,110,046	4,592,000	1,296,892	5,192,000
California and Idaho	26,893	104,000	20,066	79,000
Colorado	10,019,597	31,701,000	10,346,218	33,299,000
Georgia	60,636	246,000	75,620	327,000
Illinois	58,467,736	168,925,000	79,310,075	198,388,000
Indiana	19,132,889	54,524,000	26,229,099	65,046,000
Iowa	4,335,161	16,119,000	5,710,735	20,517,000
Kansas	2,955,170	10,816,000	4,035,404	12,981,000
Kentucky	42,134,175	127,037,000	44,777,317	113,542,000
Maryland	1,222,707	4,122,000	2,285,926	6,911,000
Michigan	929,390	4,693,000	1,172,075	5,545,000
Missouri	2,924,750	11,153,000	3,403,151	11,575,000
Montana	2,572,221	8,208,500	3,147,678	9,652,000
New Mexico	3,147,173	10,977,000	2,915,173	10,668,000
North Carolina	78,570	388,000	36,019	132,000
North Dakota	1,327,564	3,513,000	1,385,400	3,275,000
Ohio	26,953,791	87,056,000	40,546,443	98,610,000
Oklahoma	2,802,511	11,527,000	2,885,038	10,874,000
Pennsylvania—Anth'ite	54,683,022	273,700,000	93,339,009	506,787,000
Pennsylvania—Bit.	113,148,308	351,777,000	171,879,913	472,217,000
Total Pennsylvania	167,831,330	625,477,000	275,218,922	979,004,000
South Dakota	7,752	22,000	10,379	25,000
Tennessee	4,876,774	14,095,000	6,040,268	16,515,000
Texas	1,106,007	2,563,000	1,187,329	2,162,000
Utah	4,992,008	15,687,500	4,720,217	13,657,000
Virginia	10,491,174	27,083,000	11,761,643	32,468,000
Washington	2,581,165	10,279,000	2,926,392	10,894,000
West Virginia	80,488,192	236,162,000	107,899,941	285,481,000
Wyoming	5,971,724	18,162,000	7,575,031	20,916,000
Totals, net tons and dollars	476,951,121	$1,548,520,000	657,495,926	$2,020,114,000

Exports of bituminous coal from the Florida Customs District during 1924 amounted to 3,575 tons. Coke tonnage amounted to 5,314, anthracite 3 tons and foreign bunker 99,746 tons.

Bituminous Coal Mining by Different Methods Used in 1923.

The following data, from official sources, shows tonnage mined by hand, by machine, and otherwise produced, also total production of soft coal for 1923.

	Mined by Hand	Shot off the Solid	Mined by Machines	From Strip Pits	Not Specified	Total
Alabama	3,740,428	7,241,565	8,716,291	545,102	214,263	20,457,649
Alaska	11,983	107,843	.....	.....	.....	119,826
Arkansas ...	30,130	839,070	189,861	154,731	83,100	1,296,892
Colorado	4,430,770	894,033	4,896,915	.....	124,500	10,346,218
Georgia	2,400	21,681	.....	50,589	950	75,620
Illinois	4,618,236	18,936,803	54,170,999	1,283,044	300,993	79,310,075
Indiana	1,017,529	8,278,979	14,234,398	2,289,887	408,306	26,229,099
Iowa	1,011,345	3,447,076	1,181,342	.....	70,972	5,710,735
Kansas	103,418	3,045,907	97,941	651,155	136,983	4,035,404
Kentucky ...	1,569,655	4,143,137	37,710,934	844,003	509,588	44,777,317
Maryland ...	1,410,336	255,939	582,734	.....	36,917	2,285,926
Michigan ...	.....	81,238	1,086,337	.....	4,500	1,172,075
Missouri ...	481,472	955,100	1,005,756	845,143	115,680	3,403,151
Montana ...	785,925	842,054	1,495,902	.....	23,797	3,147,678
N. Mexico..	1,364,383	670,840	851,705	.....	28,245	2,915,173
N. Dakota..	20,797	373,175	426,008	376,384	189,036	1,385,400
Ohio	650,361	654,651	35,877,385	2,988,819	375,227	40,546,443
Oklahoma ..	58,176	816,556	1,636,668	313,471	60,167	2,885,038
Pennsylvania.	54,503,203	4,315,347	110,326,052	1,299,166	1,436,145	171,879,913
Tennessee ..	923,021	3,002,172	1,999,345	1,704	114,026	6,040,268
Texas	690,535	371,222	44,519	.....	81,053	1,187,329
Utah	1,175,487	322,905	3,221,425	.....	400	4,720,217
Virginia ...	511,564	2,520,870	8,645,351	.....	83,858	11,761,643
Washington .	1,605,634	1,025,617	252,880	.....	42,261	2,926,392
W. Virginia.	17,895,509	4,179,989	84,986,380	296,936	541,127	107,899,941
Wyoming ..	1,001,323	2,764,456	3,793,415	.....	15,837	7,575,031
Other States.	23,769	27,306	5,000	.....	10,389	66,464
Total ..	99,637,389	70,135,531	377,435,543	11,940,134	5,008,320	564,156,917

United States Imports of Bituminous Coal.

Month	1918	1919	1920	1921	1922	1923	1924
January	105,569	72,784	115,445	66,859	111,037	337,649	43,751
February ...	101,450	55,834	87,890	56,258	93,019	384,142	46,362
March	128,248	76,528	71,126	83,100	118,604	319,941	53,972
April	91,334	60,550	89,993	89,204	68,695	159,253	22,186
May	103,186	81,511	79,728	66,693	41,654	72,084	15,032
June	141,422	31,294	94,038	84,100	135,343	45,320	31,200
July	109,306	43,542	53,994	96,200	189,940	61,856	21,426
August	111,350	43,570	107,792	134,478	770,332	58,344	27,216
September ..	113,969	77,031	126,197	112,762	1,123,188	50,321	22,782
October	134,508	109,852	90,867	120,390	1,143,157	89,059	31,643
November ..	90,878	131,334	90,548	125,297	366,423	46,399	33,226
December ...	69,738	119,340	103,944	87,506	356,505	56,262	33,228
Total ...	1,301,229	903,170	1,111,598	1,122,847	4,517,857	1,680,630	374,517

Anthracite Coal Shipments Yearly from Outset to 1923.

Year	Tons	Year	Tons	Year	Tons	Year	Tons
1820	365	1846	2,344,005	1872	19,669,778	1898	41,899,751
1821	1,073	1847	2,882,309	1873	21,227,952	1899	47,665,204
1822	3,720	1848	3,089,238	1874	20,145,121	1900	45,107,484
1823	6,951	1849	3,242,966	1875	19,712,472	1901	53,568,601
1824	11,108	1850	3,358,899	1876	18,501,011	1902	31,200,890
1825	34,893	1851	4,448,916	1877	20,828,179	1903	59,362,831
1826	48,047	1852	4,993,471	1878	17,605,262	1904	57,492,522
1827	63,434	1853	5,195,151	1879	26,142,689	1905	61,410,201
1828	77,516	1854	6,002,334	1880	23,437,242	1906	55,698,595
1829	112,083	1855	6,608,567	1881	28,500,017	1907	67,109,393
1830	174,734	1856	6,927,580	1882	29,120,096	1908	64,665,014
1831	176,820	1857	6,644,941	1883	31,793,027	1909	61,969,885
1832	363,271	1858	6,839,369	1884	30,718,293	1910	64,905,786
1833	487,749	1859	7,808,255	1885	31,623,530	1911	69,954,299
1834	376,636	1860	8,513,123	1886	32,136,362	1912	63,610,578
1835	560,758	1861	7,954,264	1887	34,641,018	1913	69,069,628
1836	684,117	1862	7,869,407	1888	38,145,718	1914	68,342,601
1837	869,441	1863	9,566,006	1889	35,817,093	1915	67,883,776
1838	738,697	1864	10,177,475	1890	36,615,459	1916	67,376,364
1839	818,402	1865	9,652,391	1891	40,448,336	1917	77,133,305
1840	864,379	1866	12,703,882	1892	41,893,340	1918	76,649,918
1841	959,773	1867	12,988,725	1893	43,089,537	1919	66,855,462
1842	1,108,412	1868	13,801,465	1894	41,391,200	1920	68,915,460
1843	1,263,598	1869	13,866,180	1895	46,511,477	1921	67,617,713
1844	1,630,850	1870	16,182,191	1896	43,177,485	1922	40,815,777
1845	2,013,013	1871	15,699,721	1897	41,637,864	1923	72,668,621

Anthracite used at the mines and breakers for steam and heat represents more than 10 per cent of the total output and is not included above.

Growth of British Export Trade.

In the course of seventy-five years the British export trade increased enormously as shown by the following table of gross tons:

Countries	1848	1890	1900	1910	1920	1923	1924
France	515,975	5,093,329	8,314,697	9,588,892	11,690,922	18,826,352	14,534,844
Germany	170,038	3,350,512	5,938,178	10,005,515	13,457	14,806,232	6,824,071
Russia	83,582	1,593,189	3,116,099	3,224,344	92,879	476,205	45,030
Sweden	37,995	.....	2,986,579	3,991,207	1,372,478	3,168,367	3,549,916
Norway	18,800	2,313,817	1,342,759	1,982,599	800,917	1,609,758	1,821,798
Denmark	145,286	1,325,585	2,056,990	2,712,681	1,040,107	3,170,269	3,551,091
Belgium	3,882	.....	1,152,109	1,559,309	671,385	6,504,592	3,329,885
Holland	184,434	527,460	1,812,257	2,243,658	239,067	6,794,346	2,743,903
Spain	53,548	1,905,618	1,695,820	2,876,276	290,141	1,145,801	1,499,038
Italy	46,927	3,910,847	5,115,125	8,784,504	2,905,217	7,592,735	6,706,198
Portugal	33,066	627,529	569,901	1,136,496	301,413	834,982	986,387
Total	1,329,764	20,994,673	34,449,635	64,520,320	24,931,853	79,459,469	61,651,273

United States Bituminous Production, Yearly Since Outset.

1807-1820	3,000	1847 ...	1,735,062	1873 ...	31,449.643	1899 ...	193 323,187
1822 ...	54,000	1848 ...	1,968,032	1874 ...	27,787,130	1900 ...	212.316,112
1823 ...	60,000	1849 ...	2,453.497	1875 ...	29,862,554	1901 ...	225,828,149
1824 ...	67,040	1850 ...	2,880,017	1876 ...	30.486,755	1902 ...	260,216,844
1825 ...	75,000	1851 ...	3,253,460	1877 ...	34,841,444	1903 ...	282,749 348
1826 ...	88,720	1852 ...	3,664,707	1878 ...	36,245,918	1904 ...	278.659,689
1827 ...	94,000	1853 ...	4,169,862	1879 ...	37.898.006	1905 ...	315.062,785
1828 ...	100,408	1854 ...	4,582,227	1880 ...	42,831,758	1906 ...	342.874,867
1829 ...	102,000	1855 ...	4,784.919	1881 ...	53,961,012	1907 ...	394 759,112
1830 ...	104,800	1856 ...	5,012,146	1882 ...	68,429,933	1908 ...	332,573.944
1831 ...	120,100	1857 ...	5,153,622	1883 ...	77.250,680	1909 ...	379,744.257
1832 ...	146,500	1858 ...	5,548,376	1884 ...	82,998.704	1910 ...	417,111.142
1833 ...	133,750	1859 ...	6,013,404	1885 ...	72.824.321	1911 ...	405.907.059
1834 ...	136.500	1860 ...	6,494,200	1886 ...	74.644.981	1912 ...	450.104,982
1835 ...	134.000	1861 ...	6,688.358	1887 ...	88,562.314	1913 ...	478.435,297
1836 ...	142,000	1862 ...	7.790,725	1888 ...	102,040.093	1914 ...	422.703,970
1837 ...	182,500	1863 ...	9,533,742	1889 ...	95,682,543	1915 ...	442,624.426
1838 ...	445,452	1864 ...	11,066,474	1890 ...	111.302.322	1916 ...	502,519.682
1839 ...	552,038	1865 ...	11,900,427	1891 ...	117,901.238	1917 ...	551,790.563
1840 ...	1,102,931	1866 ...	13,352,400	1892 ...	126.856.567	1918 ...	579 385.820
1841 ...	1,108,700	1867 ...	14,722.313	1893 ...	128 385,231	1919 ...	465.860,058
1842 ...	1,244,494	1868 ...	15,858.555	1894 ...	118,820.405	1920 ...	568,666.683
1843 ...	1,504.121	1869 ...	15.821,226	1895 ...	135,118,193	1921 ...	415.921,950
1844 ...	1,672,045	1870 ...	17,371,305	1896 ...	137,640.276	1922 ...	422,268,099
1845 ...	1,829,872	1871 ...	27.543.023	1897 ...	147.617.519	1923 ...	545.400,000
1846 ...	1,977,707	1872 ...	27,220,233	1898 ...	166,593,623	1924 ...	483.280,000

United States Exports of Anthracite.

Exports of anthracite coal from the United States, principally to Canada, during last seven years were:

	1918	1919	1920	1921	1922	1923	1924
January	241,185	368,749	306,069	289,340	224,040	356,016	272,005
February	227,319	221,018	272,368	291,950	274,905	330,351	309,510
March	397,358	117,805	419,682	307,940	294,753	399,563	311,431
April	340,861	285,190	347,644	368,534	109,290	421,922	245,483
May	425,110	398,890	277,197	434,308	60,860	445,813	274.932
June	378,753	474,315	511,951	495,896	40,284	418.594	349,134
July	395,537	487,653	659,059	388.041	16,698	455.370	290 097
August	408,194	505.219	552,627	373.005	28,704	442,475	257,090
September	442,714	489.703	325.234	287,268	88,688	175,689	327,322
October	456,029	433,742	444,391	307,873	404,999	400,599	352,118
November	430.369	320,719	333,265	329,380	440,208	369,429	282.950
December	292,014	345,402	372,441	396,227	381,758	328,945	320,845
Total	4,435,543	4,448,475	4,824,776	4,179,812	2,365,187	4,544,766	3,588,036

The uniformity of these figures in non-strike years is noticeable.

STRIKE FACTS

Final Report of Men Involved and Days' Work Lost in 1922.

The Geological Survey's final report for 1922 shows that 603,000 men were involved in the great strike of that year, of whom 461,000 were bituminous miners and 142,000 anthracite miners. Average time lost per man striking was 117 days in the bituminous fields and 138 in the anthracite region. In man-days, the time lost reached the unprecedented total of 73,000,000.

These statistics are based upon reports received from the operators checked against weekly reports of shipments by districts from the railroads, which revealed the extent to which the mines of a given district were rendered idle by the strike. The original returns have been carefully examined and, if anything, are believed to understate the effectiveness of the strike and the number of men who responded to the call, particularly in the non-union districts.

The figures in the following table include men who continued on strike after the mines in which they were employed resumed operation with a subnormal force. Thus, the number shown is greater than the number of employes in those mines that were forced to close down entirely.

It would be misleading, however, to show the days lost on account of strikes without at the same time mentioning the days lost through other causes. Even under the extraordinary conditions of 1922, when all members of the union outside of Kentucky, and many thousands of non-union miners as well, were on strike, the time lost on account of causes other than strikes reached the large total of 65,186,000 man-days.

Chief among these other causes of lost time were "no market," which prevailed during the first quarter of the year, and car shortage, which became acute with the walkout of the railway shopmen on July 1st.

Details by States.

Details for the various States are shown below:

State	1922 Men on Strike	1922 Total Days Lost	1922 Average Days Lost Per Striker
Alabama	46	167	4
Arkansas	3,691	435,507	118
Colorado	6,672	527,250	79
Illinois	93,584	11,547,829	126
Indiana	31,721	3,924,396	124
Iowa	12,192	1,479,497	121
Kansas	6,515	847,075	130
Kentucky	10,270	605,441	59
Maryland	4,446	688,206	155
Michigan	2,062	247,919	120
Missouri	7,535	939,192	125
Montana	3,361	428,678	128
New Mexico	585	75,135	128
North Dakota	578	49,238	85

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Ohio	46,283	5,502,885	118
Oklahoma	5,872	773,127	132
Pennsylvania (bit.)	155,604	18,388,895	118
Tennessee	5,864	482,231	82
Texas	693	13,867	20
Utah	2,111	212,896	101
Virginia	240	2,200	9
Washington	2,225	299,861	135
West Virginia	49,832	5,348,298	107
Wyoming	8,607	1,054,227	122
Total bituminous	460,589	53,874,017	117
Penn. (anthracite)	142,442	19,623,026	138
Total U. S.	603,031	73,497,043	122

World's Hydro-Electric Resources.

One hundred and thirty-eight million water horse-power are available for the work of the world, according to the first complete survey of hydraulic power sources just made from documents submitted at the World Power Conference, held in London last summer.

Of all countries, the United States is richest in this "white coal," both developed and undeveloped, with Canada second. In both countries, however, many of the undeveloped hydro-electric sites are in remote and thinly populated sections where power requirements are small.

Figures for the leading countries are given as follows:

	Power Developed in H.P.	Power Available in H.P.		Power Developed in H.P.	Power Available in H.P.
United States	9,000,000	34,500,000	India	340,000	7,500,000
Canada	3,225,000	18,250,000	Japan	1,694,000	6,415,000
Sweden	1,400,000	11,600,000	France	1,350,000	5,350,000
Norway	1,325,000	11,000,000	Germany	Not stated	1,830,000
Switzerland	1,490,000	8,000,000	Great Britain	250,000	280,000

British Coal to United States and Canada.

Exports of coal from Great Britain to the United States and Canada in 1924, 1923 and 1922 by ports, were as follows:

	United States			Canada		
Ports	1922	1923	1924	1922	1923	1924
Bristol Channel	1,362,310	533,080	82,041	255,482	114,717	227,026
No. West Ports	272,390	51,736	16	113,109	97,290	.....
No. East Ports	649,911	91,136	.....	253,586	40,916	.....
Humber Ports	357,940	23,312	.....	57,469	100	1
Scotland E. Coast	180,396	38,747	18,960	76,749	21,128	11,028
Scotland W. Coast	270,972	19,703	134	80,892	95,080	40,780
Other ports E. Coast	.....	.....	.....	131	.....	.....
Total	3,093,919	757,714	101,151	837,418	369,231	278,934

ANALYSES OF COAL IN TIDEWATER POOLS

In connection with its work of sampling coal for shipment to the Panama Canal and to certain foreign governments, the U. S. Bureau of Mines collected and analyzed a large number of samples of tonnage shipped through the various tidewater coal exchanges which were maintained during the war and for some time afterwards.

The results of these tests have recently been published by the Bureau in Bulletin 230, and as it is still the practice to some extent to use pool numbers in making sales and quoting prices in the tidewater trade, the analyses possess trade interest. They are the most authoritative data on this subject that have been published, as the exchanges themselves never gave out any official figures showing how coal in the different pools was supposed to analyze.

Below are some average figures taken from the Bureau of Mines report, the number of analyses used in determining the average for each pool being indicated by the first column of figures:

Samples used in av.	Pool	Shipping Point	Average Analyses — Moist.	Vol. Mat.	Fix. Car.	Ash	Sulp.	B. T. U. Dry Basis
53	1	Lamberts Point.....	3.14	18.15	74.29	7.56	0.54	14,484
150	1	Lamberts Point.....	2.78	18.29	74.39	7.32	0.53	14,565
74	1	Lamberts Point.....	2.90	18.19	73.90	7.91	0.60	14,444
152	1	Lamberts Point.....	2.97	18.45	73.30	8.25	0.64	14,374
37	1	Sewalls Point.....	2.72	18.82	74.66	6.52	0.66	14,613
23	1	Sewalls Point.....	2.27	18.47	75.34	6.19	0.77	14,698
35	1	Sewalls Point.....	2.39	17.96	75.86	6.18	0.72	14,688
33	1	Sewalls Point.....	2.67	18.89	74.43	6.68	0.80	14,590
16	1	Newport News.....	2.86	22.08	72.36	5.56	0.72	14,797
28	1	Newport News.....	2.02	22.19	72.56	5.25	0.75	14,794
7	1	Newport News.....	2.17	21.84	72.36	5.80	0.88	14,748
608	**1**	**Above ports (avg.)**	**2.78**	**18.68**	**74.03**	**7.29**	**0.63**	**14,531**
128	2	Lamberts Point.....	2.65	18.57	72.84	8.59	0.54	14,330
103	2	Lamberts Point.....	2.55	17.65	73.58	8.77	0.62	14,307
22	2	Lamberts Point.....	2.75	17.65	72.10	10.25	0.76	14,017
37	2	Lamberts Point.....	3.07	18.25	71.62	10.13	0.69	14,042
31	2	Sewalls Point.....	3.32	17.34	74.87	7.79	0.72	14,411
24	2	Sewalls Point.....	2.75	17.58	75.14	7.28	0.68	14,516
7	2	Sewalls Point.....	2.96	18.19	74.54	7.27	0.89	14,450
37	2	Sewalls Point.....	2.66	17.60	73.60	8.80	0.78	14,234
19	2	Newport News.....	3.19	23.09	70.32	6.59	0.66	14,523
14	2	Newport News.....	3.16	23.51	70.27	6.22	0.81	14,569
422	2	Above ports (avg.)	2.77	18.40	73.05	8.45	0.65	14,310
31	4	Sewalls Point.....	2.25	16.89	73.02	10.09	0.75	14,025
13	5	Lamberts Point.....	2.81	33.31	55.92	10.77	1.08	13,568
93	5	Newport News.....	2.88	33.38	57.13	9.49	1.11	13,732
18	6	Lamberts Point.....	2.83	32.38	54.41	13.21	0.88	13,182
61	6	Newport News.....	3.31	34.17	54.78	11.05	1.14	13,323
14	7	Lamberts Point.....	3.65	32.56	55.80	11.64	1.05	13,364
121	7	Newport News.....	2.79	32.97	57.25	9.78	0.92	13,703

Samples used in av.	Pool	Shipping Point	Average Analyses Moist.	Vol. Mat.	Fix. Car.	Ash	Sulp.	B. T. U. Dry Basis
4	8	Sewalls Point.....	3.08	28.93	62.84	8.23	1.18	14,140
1	9	Curtis Bay.....	3.89	17.73	69.71	12.56	1.61	13,576
2	9	Greenwich Pier.....	2.14	19.47	71.13	9.40	1.24	14,064
4	10	Curtis Bay.....	2.96	18.61	67.51	13.88	1.78	13,287
1	10	Canton Pier.....	7.01	22.91	65.25	11.84	2.39	13 511
5	10	Greenwich Pier.....	2.34	21.45	66.04	12.51	3.49	13,472
3	11	Curtis Bay.....	3.29	19.72	67.22	13.06	1.83	13,408
1	11	Canton Pier.....	4.60	20.94	67.29	11.77	3.88	13,641
2	11	Greenwich Pier.....	2.33	20.42	64.41	15.17	1.99	13,016
6	11	Port Richmond.....	3.72	22.74	63.41	13.85	2.32	13,190
1	15	Greenwich Pier.....	3.05	30.67	58.47	10.86	1.65	13,522
1	18	Curtis Bay.....	3.68	21.41	62.91	15.68	2.21	13,001
1	18	Port Richmond.....	3.02	18.08	63.50	18.42	3.17	12,485
2	21	Greenwich Pier.....	3.20	34.60	52.84	12.56	3.00	13,171
7	30	Canton Pier.....	2.56	38.16	54.57	7.27	1.75	13,926
8	30	Greenwich Pier.....	2.85	37.82	55.37	6.81	1.43	13,939
1	30	Port Richmond.....	1.81	39.00	54.10	6.90	1.84	13,889
9	31	Curtis Bay.....	2.98	33.38	56.44	10.18	1.47	13,486
11	31	Canton Pier.....	3.13	35.18	53.63	11.19	1.88	13,184
10	31	Greenwich Pier.....	2.89	36.51	54.65	8.84	1.53	13,669
60	33	Curtis Bay.....	2.10	39 35	51.88	8.77	3.31	13,732
6	33	Canton Pier.....	2.42	37.79	51.68	10.53	2.84	13,346
7	33	Greenwich Pier.....	2.47	37.68	53.79	8.53	2.26	13,702
2	33	Port Richmond.....	2.78	40.11	51.90	7.99	3.21	13,600
104	34	Curtis Bay.....	2.51	38.70	52.25	9.05	3.17	13,658
59	34	Canton Pier.....	2.20	35.14	52.44	12.42	2.86	13,136
15	34	Greenwich Pier.....	2.35	35.43	51.70	12.87	2.81	13,084
5	34	Port Richmond.....	2.35	39.20	52.12	8.68	2.93	13,702
2	36	Curtis Bay.....	1.90	36.05	55.75	8.20	1.53	13,950
51	37	Curtis Bay.....	1.67	37.95	54.22	7.83	1.76	13,975
11	38	Curtis Bay.....	2.15	36.81	54.03	9.16	2.40	13 757
1	38	Canton Pier.....	2.19	33.44	52.42	14.14	4.00	12,992
3	39	Curtis Bay.....	1.53	31.93	56.10	11.97	1.30	13,460
4	39	Canton Pier.....	1.58	31.70	57.27	11.03	1.23	13,608
2	39	Greenwich Pier.....	1.98	34.65	56.37	8.98	1.35	13,844
3	40	Canton Pier.....	3.95	31.05	57.84	11.11	1.49	13,399
2	40	Greenwich Pier.....	2.50	32.94	54.38	12.68	2.14	13,192
32	41	Newport News.....	2.78	34.84	56.50	8.66	1.11	13,779
12	43	Newport News.....	2.14	34.43	58.43	7.14	0.81	14,129
1	43	Curtis Bay.....	2.54	36.09	54.96	8.95	2.51	13.770
9	44	Curtis Bay.....	3.35	33.26	52.59	14.15	3 08	12,934
5	44	Port Richmond.....	3.95	33.00	54.41	12.59	2.92	13,119
16	51	Curtis Bay.....	1.41	36.99	54.58	8.43	2.47	13,986
12	60	Curtis Bay.....	2.19	36.97	55.75	7.28	1.65	13 984
7	60	Canton Pier.....	2.25	35.63	55.13	9.24	2.07	13,815
7	60	Greenwich Pier.....	2.40	36.33	55.84	7.83	1.74	13,958

Samples used in av. Pool	Shipping Point	Average Analyses Moist.	Vol. Mat.	Fix. Car.	Ash	Sulp.	B. T. U. Dry Basis
7 60	Port Richmond.....	2.10	37.48	55.57	6.95	1.34	14,004
4 61	Curtis Bay.....	2.66	37.17	54.56	8.27	2.06	13,798
7 61	Canton Pier.....	3 37	32.93	55.95	11.12	1.70	13,434
5 61	Greenwich Pier.....	2.96	34.56	55.10	10.34	1.75	13,443

HIGH TAX BURDENS

Anthracite Coal Producers Have to Pay for Extravagant Local Improvements.

Following the tax inflation program which the politicians in the coal regions have inflicted on the anthracite companies, local communities have projected municipal improvements on a large scale, says the Philadelphia News Bureau. As a contributing factor in the cost of anthracite, the boosted coal lands assessments are important.

An example of what is going on is the action of the voters in Branch Township, Schuylkill County, Pa., in approving at the polls on election day, by a small majority, a bond issue of $430,000. Of this amount $80,000 is for refunding, $100,000 is for a new grade school and $250,000 is for a new high school.

The school district is a small one with population of only about 1,579, while according to available figures the total number of public school pupils is around 424. Of this number 58 were listed as high school pupils. Presumably the school district expects to draw on outside territory for some of its future school attendance to warrant the expenditure for a high school, as the present number of pupils is absurdly out of line with the proposed outlay.

However, the school district's bonded indebtedness represented by the $430,000 loan would appear to be over $270 per capita. Exclusive of the $80,000 item for canceling existing indebtedness, the balance of $350,000 to be borrowed for new school buildings is equivalent to more than $1,000 per pupil, based on an average attendance of 346.

Enormous Increase in Valuations.

This sort of thing is to be expected as a result of the remarkable increase in land valuation brought about by the politicians, but note who pays the bill. Out of a total real estate valuation of $11,903,804 for Branch Township on the 1922 returns, no less than $11,676,804 is represented by coal holdings.

Before the big inflation, the basis in 1921 was only $2,157,000 as the total valuation in the township, of which $1,968,000 represented coal holdings. The principal coal properties in the township are held by the Reading, Lehigh Valley and Delaware & Hudson.

It is estimated that the school loan interest and sinking fund charges should add 4 mills to the tax rate. Of this the coal land owners would be obliged to pay annually $44,707, whereas the contribution of other tax payers would be but $908.

The Reading is still contesting in court the 1922 valuation. Some other coal land owners reached compromise agreements for which allowance is made in the the figures $11,676,804, representing coal land valuation.

WAGES IN NORTHERN WEST VIRGINIA

Rates for Pick and Machine Mining and Inside and Outside Labor in Fairmont Region and Surrounding Fields.

Under the terms of an agreement signed in Baltimore on March 28, 1924, by officials of the Northern West Virginia Coal Operators' Association and of District 17, United Mine Workers of America, the wage scale in effect at that time was renewed for a term of three years from April 1, 1924.

Twelve and one-half counties are embraced in the territory covered by the agreement, namely: Monongalia, Marion, Harrison, Preston, Taylor, Barbour, Randolph, Upshur, Lewis, Gilmer, Braxton and Webster counties, and that portion of Nicholas County served by the Baltimore & Ohio RR.

The mining rates shown below are for net tons of 2,000 pounds:

Mining Rates.

(Coal four feet and over in thickness)

Pick mining—entries ..... .936
Rooms and pillars..... .876
Machine Mining with Machine Drilling
Loading—entries ..... .627
Loading—rooms and pillars..... .607
Cutting entries—chain machine.. .179
Cutting rooms and pillars—chain machine ..... .1623
Machine Mining without Machine Drilling
Loading—entries ..... .647
Loading—rooms and pillars..... .627
Cutting entries—chain machine... .169
Cutting rooms and pillars—chain machine ..... .1523

Punching machine rates 5 cents above chain machine rates.

(Coal less than four feet in thickness)

Pick mining—rooms and pillars.. .95
Pick mining—entries 1.065
Loading entries, hand drill..... .7575
Cutting entries, hand drill..... .1948
Loading rooms, hand drill..... .70
Cutting rooms, hand drill..... .1583
Loading entries, machine drill... .7375
Cutting entries, machine drill.... .2048
Loading rooms, machine drill.... .68
Cutting rooms, machine drill..... .1683

Punching machine rates to be five cents above chain machine rates.

Outside Day Labor Rates.

	Hour	Day
Dumpers	.86¼	$6.90
All other tipple men.....	.81⅞	6.55
Picking table boys.....	.59	4.72
Greasers	.81⅞	6.55
Blacksmiths, 1st class.....1.01¼		8.10
Blacksmiths, 2d class.....	.91¼	7.30
Blacksmiths' helpers	.81⅞	6.55
Car repairmen	.91¼	7.30
Car repairmen helpers.....	.87¼	6.98
Machinists, 1st class.....1.03¾		8.30
Machinists, 2d class.....	.91¼	7.30
Machinists' helpers, inside..	.83¾	6.70
Machinists' helpers, outside.	.81⅞	6.55
Electric coal hoist eng. shaft 1.00		8.00
Engineers	.91¼	7.30
Combination engineer and fireman	.91¼	7.30
Water tenders	.87½	7.00
Combination firemen, sub-station and fan man.....	.86¼	6.90
Fireman, hand firing.....	.85⅝	6.85
Sub-station operator and fan tender	.68¾	5.50

Inside Day Labor Rates.

	Hour	Day		Hour	Day
Drivers	.90¾	7.26	Wiremen	90¾	7.26
Motormen, all classes	.92	7.36	Wiremen helpers	.84¼	6.74
Motorman helpers	.90¾	7.26	Pipemen	.89¾	7.18
Gathering locomotives	.92	7.36	Pumpers	.84¼	6.74
Gathering loco. helpers	.90¾	7.26	Trappers	.54⅜	4.35
Gripmen	.90¾	7.26	Bratticemen	.90¾	7.26
Trackmen, main line	.92	7.36	Bratticemen helpers	.84¼	6.74
Trackmen, ordinary	.90¾	7.26	Cagers	.92¾	7.42
Trackmen helpers	.88¼	7.06	Cagers' helpers	.86¾	6.94
Slatemen	.84¼	6.74	Cagers' couplers	.84¾	6.78
Timbermen	.90¾	7.26	Greasers	.84¼	6.74
Timbermen helpers	.84¼	6.74	All other inside labor	.84¼	6.74

Arcwall or Track Cutting Machine Rates.

The following rates apply to the arcwall or track cutting machine when the cutting is made at the top or bottom of the seam:

Machine mining with machine drilling
(bottom cutting)
(Coal four feet and over)

Cutting rooms	.121725
Cutting entries	.13425
Loading rooms	.607
Loading entries	.627

Machine mining with machine drilling
(bottom cutting)
(Coal less than four feet)

Cutting rooms	.126225
Cutting entries	.1536
Loading rooms	.68
Loading entries	.7375

Machine mining without machine drilling
(bottom cutting)

Cutting rooms	.114225
Cutting entries	.12675
Loading rooms	.627
Loading entries	.647

Machine mining without machine drilling
(bottom cutting)

Cutting rooms	.118725
Cutting entries	.1461
Loading rooms	.70
Loading entries	.7575

Machine mining with hand drilling
(top cutting)

Cutting rooms	.104225
Cutting entries	.11675
Loading rooms	.637
Loading entries	.657

Machine mining with hand drilling
(top cutting)

Cutting rooms	.108725
Cutting entries	.1361
Loading rooms	71
Loading entries	.7675

During the last fiscal year 152,000 tons of coal were mined on the island of Spitzbergen by the Store Norske Spitzberger Kulkompani, a Norwegian company which sells its output chiefly to the government of that country for use on the State railways. Spitzbergen is located north of the Arctic Circle, and coal was first mined there some fifteen years ago by a company organized by American capitalists.

NEW RIVER WAGES

Details of the 1917 Scale, Now Being Paid in That Field.

Practically all the mines in the New River district are now being operated on the 1917 scale, which calls for the following wages for various classes of labor:

Pick mining, room and pillar work, mine run, per net ton..	.5911
For all machine cutting, per ton.	.1071
Loading and scrapping rooms, and pillars, mine run, per ton.....	.4732

YARDAGE; PER LINEAL YARD

7 feet in width taken, per inch.	.08
8 feet in width taken, per inch.	.09
9 feet in width taken, per inch.	.10
10 feet in width taken, per inch.	.11
11 feet in width taken, per inch.	.12
Room yardage, top, room width, when taken down, loaded or gobbed up, per inch.....	.0650
Room yardage, bottom, road width, when taken up, loaded or gobbed, per inch	.0833

INSIDE DAY WAGE SCALE

Motormen and machine runners...	$4.68
Brakemen, trip rider, rope haulage	4.27
Skilled wiremen	4.68
Wiremen's helpers	4.24
Tracklayers	4.55
Tracklayers' helpers, slatemen	4.15
Slate shooters	4.39
Bratticemen, timbermen	$4.55
Dumpmen	4.20
Bottom cagers	4.35
Drivers, single mule.....	4.15
Drivers, two or more mules.....	4.27
Couplers, where men are employed	4.10
Couplers, where boys are employed	2.65
Greasers, where men are employed	4.10
Greasers, where boys are employed	2.65
Trappers	2.65
Pipemen	4.55
All other inside day labor.....	4.10

OUTSIDE WAGE SCALE

Dumpers	$4.15
Top tipplemen	4.08
Transfer operators, trimmers	4.00
Drum runners	4.60
Car cleaners and car droppers....	4.00
Blacksmiths	5.00
Blacksmiths' helpers	4.30
Car repair men.....	4.56
Greasers, where men are employed	4.00
Greasers, where boys are employed	2.50
Couplers, where men are employed	4.00
Couplers, where boys are employed	2.50

Exports from Charleston.

Exports of bituminous coal from Charleston, S. C., during the calendar year 1924 were as below, in comparison with six years previous:

Month	1918	1919	1920	1921	1922	1923	1924
January	....	....	23,583	24,271	14,007	7,512	11,568
February	....	3,960	62,222	26,713	12,025	7,382	11,816
March	850	6,120	46,111	39,039	13,038	10,810	7,934
April	....	3,181	69,242	12,173	19,836	8,006	7,877
May	....	12,942	66,475	19,745	10,980	28,845	11,855
June	799	10,057	71,548	62,249	2,807	30,474	8,024
July	1,343	9,455	64,826	59,883	19,025	11,671	11,828
August	....	26,165	50,889	12,727	2,894	23,775	11,759
September	782	24,678	67,787	14,757	4,151	25,181	15,774
October	6,211	27,426	59,844	12,368	10,283	28,459	8,056
November	3,624	11,089	53,311	8,458	4,845	29,877	3,585
December	868	21,398	26,334	8,173	8,230	22,349	11,092
Total	14,471	156,471	662,172	298,506	122,111	234,301	121,168

CENTRAL PENNSYLVANIA WAGES

Rates Paid for Mining and for Inside and Outside Day Labor.

The central Pennsylvania wage rate, agreed on following the Jacksonville conference concerning the Central Competitive District scale, reaffirmed the schedule previously prevailing during a period of something more than three years and a half. It will be recalled that an agreement was entered upon early in 1920 extending from April 1, 1920, to March 31, 1922.

Following the 1922 strike, the agreement was continued to March 31, 1923, and was subsequently renewed for another year and then for a period of three years more until April 1, 1927.

This embraced mining rates as follows, per net ton of 2,000 pounds:

Pick mining	$1.1431
Machine loading	.7729
Cutting, scraping and loading	.2400
Cutting and scraping shall be advanced	.0456
For pushing cars both ways	.0535

The 1920 day-labor rates were unsatisfactory to the men and after protracted negotiations, a new scale became effective August 16, 1920, giving an increase of $1.50 to practically all classes of labor. This made the inside rate per day of eight hours:

Motormen	$7.60	Trappers	$4.00
Spraggers	7.50	Cutters	7.60
Skilled wiremen, in charge of work	7.50	Scrappers	7.35
Wiremen's helpers	7.27	Other inside labor	7.27
Track layers	7.50	Outside labor per day of eight hours:	
Track layers' helpers	7.27	Dumpers	$6.92
Bottom cagers	7.50	Ram operators	7.10
Drivers	7.50	Pushers	6.65
Trip riders	7.50	Trimmers	6.86
Water and machine handlers	7.50	Car cleaners	6.60
Timbermen	7.50	Firemen	7.10
Pipemen	7.40		

The $7.50 basis compares with $1.90 in 1900.

The Hull, England, Coal Trade.

The total quantity of coal received from mines into Hull, England, during the year 1924 was 4,942,229 tons, as against 6,944,260 tons in 1923. The totals for 12 years were as follows:

Year	Via River	Via Railway	Total	Year	Via River	Via Railway	Total
1913	517,488	7,428,477	7,945,965	1919	164,080	1,937,568	2,101,648
1914	431,944	5,220,689	5,652,633	1920	183,376	1,987,905	2,171,281
1915	261,346	4,406,387	3,667,733	1921	165,664	2,232,299	2,397,963
1916	217,849	3,072,432	3,290,281	1922	221,486	5,175,830	5,397,325
1917	195,431	2,616,925	2,812,356	1923	222,997	6,721,263	6,944,260
1918	160,930	2,444,672	2,605,602	1924	226,291	4,715,938	4,942,229

Central "Competitive Field" Wage Agreement.

The following agreement was entered into by the representatives of the coal operators and miners of Illinois, Indiana, Ohio and western Pennsylvania at Jacksonville, Fla., February 19, 1924.

1. This joint conference of operators and miners of Illinois, Indiana, Ohio and western Pennsylvania, as now constituted, hereby reaffirms the wage scale contracts now existing between the United Mine Workers of America and the coal operators whose interests are represented in this conference, and hereby extends the same for a period of three years, from April 1, 1924, to March 31, 1927, in all of their terms, provisions and conditions.

It is understood the execution of this interstate agreement extends without further negotiations, the district and sub-district agreements now in effect in the districts affected.

2. That an interstate joint conference of the Central Competitive Field shall assemble the second Monday in February, 1927, at Miami, Fla., and the president of the United Mine Workers of America and the chairman of this joint interstate conference are authorized and instructed to send out notices at the proper time as to the assembling of the conference.

New York Dealers Wage Agreements.

The retail dealers of Manhattan and the Bronx, through the Coal Merchants' Association, renewed for another year the wage agreements with their employees. In each case the wages in effect during 1924 are to be continued throughout 1925.

Under the agreement with the International Brotherhood of Teamsters, Chauffeurs, Stablemen and Helpers, the following scale applies in New York: Chauffeurs of gasoline trucks, four tons and over, $42 per week, with a nine-hour day: under four tons, $40; electric trucks, four tons and over, $39; under four tons, $37; helpers, $34; drivers of three-horse trucks, $38; four- and five-ton patent trucks, two horses, $37; all other two-horse trucks, $36; all other horse trucks, $34; stablemen, $34.

The minimum rate of wages for engineers is $48 per week, and for operators, $42. It is stipulated that members of the International Union of Steam and Operating Engineers shall be given preference in employment.

Yardmen and boatmen are to be paid $5.50 for nine hours' work.

Pennsylvania RR. Tonnage.

Revenue tonnage of anthracite and bituminous coal and coke transported by the Pennsylvania Railroad Company during years 1923 and 1924 in net tons was:

	Originated		Received from Connections		Total	
	1923	1924	1923	1924	1923	1924
Bitum. coal..	56,962,345	46,525,839	37,167,980	33,649,483	94,130,325	80,175,322
Anth. " ..	7,911,801	6,729,015	7,029,203	4,888,969	14,941,004	11,617,984
Coke	9,968,682	5,671,472	1,874,947	1,846,417	11,843,629	7,517,889
Total ...	74,842,828	58,926,326	46,072,130	40,384,869	120,914,958	99,311,195

BITUMINOUS WAGE ADVANCES

How Basic Rate in the Hocking Field Has Gone Up Since 1892.

The rate paid for pick mining in the Hocking district has long been the basing rate for the Central Competitive field. For that reason a record of the changes in the Hocking rate during the past quarter century is an accurate index to the trend of wages in the bituminous industry as a whole.

It is possible to present such a record through the courtesy of W. D. McKinney, secretary of the Southern Ohio Coal Exchange.

This shows that 1892, 1893, and up to February 17, 1894, the rate was 70 cents per net ton for screened lump coal.

The rate for subsequent years was as follows:

February 17, 1894, to April 21, 1894, 50 cents.
June 11, 1894 (when strike ended) to June 1, 1895, 60 cents.
June 1, 1895, to October 1, 1895, 51 cents.
October 1, 1895, to March 1, 1896, 55 cents.
March 1, 1896, to October 1, 1896, 61 cents.
October 1, 1896, to January 1, 1897, 45 cents.
January 1, 1897, to strike, July 4, 1897, 51 cents.
September 13, 1897 (when strike ended) to April 1, 1898, 56 cents.
April 1, 1898, to April 1, 1900, 66 cents.
April 1, 1900, to April 1, 1903, 80 cents.
April 1, 1903, to April 1, 1904, 90 cents.
April 1, 1904, to April 1, 1906, 85 cents.
April 1, 1906, to April 1, 1908, 90 cents.

(A strike was in effect from April 1 to July 18, 1906, with some mines paying the demands and working.)

April 1, 1908, to April 1, 1910, 90 cents. (Renewal of the previous agreement.)

April 1, 1910, to April 1, 1912, 95 cents.
April 1, 1912, to April 1, 1914, $1.

In the latter year the U. M. W. insisted on a change from the screened-lump to the mine-run basis in figuring miners' wages.

A new agreement was entered into, effective July 15, 1914, and running until April 1, 1916, which fixed the rate for pick mining at 67.6 cents per ton, mine-run basis.

This was renewed for two years practically without change. The rate from April 1, 1916, to April 1, 1918, was to have been 67.64 cents.

Early in 1917, however, the miners demanded another advance and the agreement was revised on April 16 of that year, the new rate being 77.64 cents.

In the fall the men demanded another raise, and for a second time the contract was modified. The new agreement, entered into on October 29, 1917, called for a rate of 87.64 cents, and was to expire at the end of the war, or not later than April 1, 1920.

On October 21, 1918, Frank J. Hayes, president United Mine Workers, urged H. A. Garfield, United States Fuel Administrator, to authorize another increase in wages. This increase was denied by Dr. Garfield on October 26, 1918.

In 1919 the U. M. W. again demanded an increase and called for a joint meeting, at which time they made a series of 13 demands, asking for an increase of 60 per cent in wages, five days per week and six hours a day.

Representatives of the operators and miners met in Buffalo, September 25, 1919, and, again in Philadelphia, October 9th, and again at the call of Secretary of Labor Wilson in Washington on October 21st, at all of which meetings the operators and miners failed to agree, and on November 1st the U. M. W. went on strike. It lasted some six weeks.

The Bituminous Coal Commission was then appointed by the President of the United States and after a long hearing they formulated a new wage scale which was accepted by the operators and miners and became effective April 1, 1920, increasing day labor from $5 to $6, cutting and loading from 70 cents to 94 cents.

In June of 1920 the Illinois miners went on strike for an increase in day wage, which resulted in a call by President Wilson for a conference of the operators and miners of the Central Competitive Field which convened at Cleveland on August 13; after five days the conference could not agree and adjourned.

The subject was then taken up in the State district meetings, and Ohio operators came to an agreement with the miners on August 28, 1920, advancing the day wage $1.50, making the basic day wage $7.50, expiring April 1, 1922, and renewed in August, 1922, for the period to April 1, 1923, and in January a further agreement to April 1, 1924. On February 16th the argreement was extended for a further period of three years, or until March 31, 1927.

Connellsville Mining Rates; Compiled by Courier.

Date in Effect	Mining, Loading room, rib, 100 bu.	Inside Labor per day	Outside Labor per day
Feb. 10, 1894..	$0.78	$1.35	$1.35
April 1, 1895..	0.90	1.50	1.35
Oct. 1, 1895...	0.95	1.59	1.59
Jan. 1, 1896...	1.05	1.65	1.68
April 29, 1899.	1.12½	1.72½	1.75½
March 1, 1900.	1.25	1.87½	1.90½
Jan. 1, 1903...	1.35	1.97½	2.00½
Dec. 16, 1903..	1.10	1.65	1.75
March 1, 1905.	1.20	1.75	1.85
March 1, 1907.	1.35	1.95	2.00
Jan. 1, 1908...	1.20	1.75	1.85
Jan. 16, 1910..	1.35	2.00	2.00
April 1, 1912..	1.44	2.15	2.15
Feb. 1, 1916...	$1.44	$2.30	$2.30
May 8, 1916..	1.66	2.40	2.40
Dec. 16, 1916..	1.82	2.75	2.75
May 1, 1917..	2.00	3.00	3.00
Oct. 1, 1917...	2.16	3.25	3.00
Nov. 10, 1917.	2.29	4.15	3.30
Dec. 1, 1919..	2.66	4.75	4.00
April 1, 1920..	3.24	5.05	4.40
Sept. 1, 1920..	3.24	6.55	5.40
May 16, 1921..	2.65	4.55	3.30
Aug. 1, 1921..	2.38	4.15	3.00
Aug. 23, 1922..	3.24	6.55	3.60
1923 and 1924.	3.24	6.55	3.60

Other rates as shown in Frick wage scale rise and fall in proportion with the above.

Central Pennsylvania Wage Increases.

Up to April 1st, 1900, the wages of the highest paid men working by the day in central Pennsylvania was $1.90. Motormen were paid $1.75. From 1901 to 1903 the standard rate was $2.25. In 1904 it was $2.40. In 1905 it was reduced to $2.27. In 1907 it was restored to $2.40. In 1910 and 1911 it was $2.53, remaining at that figure until April 1st, 1916, when it was raised to $2.77.

With the world war, higher wages ensued. The same class of rates was advanced in April, 1917, to $3.60. On November 1st, 1917, as a result of another demand on the part of the miners, wages were advanced to $5.00 a day. The national strike began November 1st, 1919, and lasted about six weeks, the men returning to work on a rate of $5.70 per day.

On April 1st, 1920, under the award of the Bituminous Coal Commission, the wage was advanced to $6.00. The miners, protesting against that decision, forced another increase on August 15th, 1920, to $7.50, so that in twenty years wages advanced from $1.90 per day to $7.50 per day. The rate for pick mining in the Central Pennsylvania district went from 50 cents per ton in 1900 to $1.2803 a gross ton and $1.1431 a net ton, the present rates. The miners can, and do, earn at these rates from $150 to $350 per month.

Average Monthly Price of Coal Exported.

Average prices of coal, both grades, exported during the year 1924 and four years previous, are given below. These are based on the value at the time of exportation at the ports from which shipped.

	Anthracite					Bituminous				
Month	1920	1921	1922	1923	1924	1920	1921	1922	1923	1924
January	$7.80	$11.20	$10.70	$11.25	$11.45	$5.00	$7.60	$5.18	$6.33	$5.23
February	8.80	10.95	10.60	11.15	11.13	5.46	7.15	5.47	6.50	5.15
March	8.03	11.05	10.60	11.03	10.60	5.66	6.90	5.30	6.46	5.00
April	8.87	10.90	9.67	10.67	10.90	6.35	6.28	4.87	6.26	4.94
May	9.05	10.77	9.60	10.45	11.13	7.10	6.02	4.78	5.63	4.63
June	9.34	10.77	8.80	10.76	10.85	7.98	5.50	5.37	5.23	4.06
July	9.20	10.58	9.00	10.65	11.10	9.38	5.75	5.50	5.08	4.42
August	9.85	10.95	8.55	10.88	11.00	10.35	4.83	6.77	4.98	4.45
September	10.05	10.50	10.36	10.56	11.35	10.35	5.00	6.70	5.01	4.30
October	10.05	11.20	11.20	11.08	11.35	10.67	4.90	6.25	5.05	4.45
November	10.67	11.15	11.00	11.33	11.25	10.05	5.10	6.47	4.95	4.73
December	10.50	11.23	11.05	11.12	11.30	8.45	4.98	6.43	5.11	4.70

Czechoslovak Coal Output

The following table shows the production of bituminous coal and lignite for the years 1913, 1923, and 1924: Metric tons.

Year	Bituminous	Lignite	Total
1913	14,782,454	25,107,456	39,889,910
1923	11,624,748	16,202,496	27,827,244
1924	14,359,400	20,507,178	34,866,578

ILLINOIS WAGE AGREEMENT

The wage agreement for Illinois mines, effective as of April 1, 1920, for two years, was executed and signed May 20, 1920, and again signed August 22, 1922, for a continuation until March 31, 1923, and again until March 31st, 1927.

First District.	
Streator, Cardiff, Clarke City, Fairbury and associated mines, including Toluca thick vein	$1.17
Third vein and associated mines, including third vein at Streator, including twenty-four inches of brushing	1.37
Wilmington and associated mines, including Bloomington thin vein, including brushing, Pontiac	1.42
Cherry, Bureau County, Middle Vein (Saint Paul Coal Co.)	1.17
Blocmington thick vein	1.32
Pontiac top vein	1.17
Marseilles	1.68
Morris, long wall, Wilmington conditions	1.59
Morris, room and pillar	1.74
Seneca, long wall (see local agreement)	1.52
Cornell, long wall, third vein conditions	1.37
Cornell, room and pillar	1.25
Second District.	
Danville, Westville, Grape Creek and associated mines Vermilion County.	1.08
Third District.	
Springfield, Dawson and associated mines	1.087
Lincoln, Niantic and Colfax	1.120
Fourth District.	
Mines on the C. & A., south of Springfield, to and including Carlinville; including Taylorville, Pana, Tower Hill, Litchfield, Hillsboro, Witt (Paisley), Divernon Pawnee, Nokomis and Kincaid	1.08
Assumption, long wall, including twenty-four inches of brushing	1.34
Moweaqua, room and pillar	1.12
Decatur, long wall, present conditions 1.23; room and pillar	1.17
Fifth District.	
Glen Carbon, Belleville and associated mines, to and including Percy, Pinckneyville, Willisville and Nashville 1.08; coal five feet and under	1.13
Sixth District.	
DuQuoin, Odin, Sandoval, Centralia and associated mines	1.04
Salem and Kinmundy	1.09
Seventh District.	
Mt. Vernon	$1.09
Jackson County (All coal five feet and under, five cents extra per ton.)	1.04
Lower Bench, Jackson County, for shipping mines, miners to carry 14 inches of brushing	1.17
Saline, White, Gallatin, Williamson and Franklin County	1.04
Eighth District.	
Fulton and Peoria Cos., thin or lower coal (Third Vein conditions)	1.37
Fulton and Peoria Counties, No. 5 Vein	1.15

Astoria No. 5 Vein (Fulton and Peoria County conditions)	1.15
Fulton and Peoria County No. 6 Vein, Kewanee, Etherly and Wyoming	1.24
Gilchrist, Wanlock, Cable and Sherrard and Silvis Mines and Ellisville	1.19
Pekin, shipping mines only	1.15

Ninth District.

Mount Olive, Staunton, Gillespie, Benld, Sorento, Coffeen and Worden, Coal five feet and under	1.13

Inside and Outside Day Wage Scale.

Tenth. The inside and outside day wage scale shall be as follows:

Mine examiners, day or night	8.04
Tracklayers	7.50
Tracklayers' helpers	7.25
Boy trappers, spraggers, couplers and switch throwers employed elsewhere than at bottom of shaft or on mechanical haulage after coupled thereto	4.00
Couplers getting $1.57 under agreement effective April 1, 1916, now to receive, per day	4.00
Boy trappers, spraggers and couplers getting $1.64 under agreement effective April 1, 1916, now to receive, per day	4.59

Spraggers, couplers and switch throwers, either at bottom of shaft or on mechanical haulage after coupled thereto, to receive $1.35 per day more than rates paid October 31, 1919.

Bottom cagers, drivers, trip riders, grippers, water haulers, machine haulers, and timbermen, where such are employed	7.50
Pipemen for compressed air plants	7.41
Brushers in long wall mines, Third Vein and Wilmington fields	7.50
Other company men, long wall mines, Third Vein and Wilmington fields	7.25
Shot firers, per hour	1.18
All other inside day labor	7.25

The scale wages now being paid outside day labor at the various mines in this State shall be the wage scale for that class of labor during the life of this agreement, with a minimum of $6.86 per day. Firemen and stokers shall receive $7.25.

Coal Exports to Argentina.

Month	1919	1920	1921	1922	1923	1924
January	43,484	145,455	107,135	14,566	.....	.....
February	38,993	70,902	50,838	4,054	.....	27,700
March	8,670	80,346	68,562	37,591	8,140	53,650
April	14,914	115,702	61,175	....	11,553	25,881
May	22,589	101,144	113,730	2,291	53,397	22,788
June	54,736	120,267	92,727	12,893	47,326	5,059
July	28,712	157,907	97,512	7,576	25,802	19,104
August	69,728	182,740	47,835	....	7,730	.....
September	85,684	276,680	36.659	....	11,630	15,660
October	95,865	268,053	23,936	....	31,664	14,973
November	19,954	107,048	26,943	....	6,908	.....
December	....	119,763	22,384	....	9,540	15,665
Total	483,329	1,746,007	752,636	78,971	131,065	196,480

Coke Exports to Various Countries.

Exports of coke from the United States to various countries during 1923 and 1924 were:

	1923	1924		1923	1924
France	128,418	23,918	Panama	160	348
Germany	53,697	10,366	Salvador	45	44
Belgium	90,651	....	Mexico	75,936	6,920
Italy	24,880	10,717	Canada	667,220	546,461
Netherlands	7,235	6,969	Bermuda	1	1
Norway	8,737	6,233	Trinidad & Tobago.	10	1
Spain	1,002	....	Other British W. I.	91	50
Switzerland	....	2,119	Cuba	6,315	6,773
England	2,638	796	Virgin Islands	1	3
Scotland	960	....	Dominican Republic.	113	214
Argentina	98	7	Haiti	10	4
Brazil	5	5,195	Jamaica	6	....
Chile	37,096	23,813	Paraguay	....	25
Colombia	51	81	French Oceania	....	12
Ecuador	80	60	Denmark	21	....
Peru	109	5,185	Ireland	20	....
Venezuela	978	84	Newfoundland and Labrador	32	130
British Honduras	4	....	Philippines	....	22
Costa Rica	98	46			
Guatemala	86	81			
Honduras	109	80	Total	1,102,376	588,705
Nicaragua	20	39			

Only 10% Increase in Bituminous Coal Mines in Six Years.

In view of the frequent allusions to increase in number of bituminous mines in the country, overdevelopment of coal areas and allied subjects, it may be interesting to set down in definite terms, based on Government reports, just what the increase has been. We therefore present figures showing changes in the last half-dozen years, dividing the mines into groups based on the annual production reported by the U. S. Geological Survey:

	200,000 Over	100,000-200,000	50,000-100,000	10,000-50,000	Less than 10,000	Total
1917	792	914	1,044	1,996	5,888	10,634
1923	748	935	1,175	2,743	6,021	11,622
	†44	*21	*131	*747	*133	*988

*Increase 1923. †Decrease 1923.

As will be seen, the most notably features are the decrease in the number of large mines and the increase in the number of medium sized (10,000 to 50,000 tons) mines. The former may account for a falling off of some 8,000,000 tons or thereabout, while the latter probably accounts for an increase of 22,000,000 or 23,000,000 tons.

The net gain would be easily absorbed did the use of soft coal increase at even half of the old-time rate. But with requirements practically at a standstill, even so small an increase as a fraction less than ten per cent in the number of mines constitutes an obstacle to the prosperity of the trade.

PITTSBURGH WAGE SCALE

The present wage scale of the Pittsburgh district was posted by the members of the Pittsburgh Coal Producers Association August 24, 1922. It became effective that date, continuing until March 31, 1923, when it was extended to March 31, 1924, and then further extended to March 31, 1927. Details are:

Pick mining—Thin vein mines, per ton of 2,000 lbs. mine run	$1.1164
Pick mining—Thick vein mines, per ton of 2,000 lbs. mine run	1.0311
Cutting—Thin vein mines, per ton of 2,000 lbs. mine run	.1692
Loading—Thin vein mines, per ton of 2,000 lbs. mine run	.7708
Cutting—Thick vein mines, per ton of 2,000 lbs. mine run	.1494
Loading—Thick vein mines, per ton of 2,000 lbs. mine run	.7337
Motormen, per day of 8 hours	7.60
Motormen helpers, per day of 8 hours	7.50
Skilled wiremen, per day of 8 hours	7.50
Wiremen helpers, per day of 8 hours	7.25
Track layers, per day of 8 hrs.	7.50
Track layers' helpers, per day of 8 hours	7.25
Bottom cagers, per day of 8 hours	7.50
Drivers, per day of 8 hours	7.50
Trip riders, per day of 8 hrs.	7.50
Water and machine haulers, per day of 8 hrs.	7.50
Timbermen, where employed, per day of 8 hrs.	7.50
Pipemen for compressed air plants, per day of 8 hrs.	7.42
Trappers, per day of 8 hrs.	4.00
All other inside labor, per day of 8 hrs.	7.25
Dumpers, per day of 8 hrs.	6.92
Ram operators, per day of 8 hrs.	7.10
Pushers, per day of 8 hrs.	6.68
Trimmers, per day of 8 hrs.	6.86
Car cleaners, per day of 8 hrs.	6.60

Dead work and yardage will be paid for at the scale in effect in 1921.

St. Lawrence District Coal Exports.

Exports of coal and coke from the St. Lawrence customs district (Rouses Point, Ogdensburg and Cape Vincent), by months, during calendar years were:

	Anthracite		Bituminous		Coke	
Month	1923	1924	1923	1924	1923	1924
January	108,787	66,063	184,166	171,791	6,146	610
February	97,929	82,589	150,077	172,041	2,811	717
March	154,447	89,692	288,295	204,556	3,729	980
April	160,276	82,815	206,573	76,246	2,265	1,027
May	146,336	85,259	279,746	56,866	2,995	643
June	127,046	123,829	288,609	182,546	1,067	677
July	136,143	87,259	159,742	65,165	881	547
August	115,843	81,602	219,971	60,037	4,064	597
September	73,623	104,704	222,873	74,282	1,011	579
October	121,154	129,953	185,839	111,746	1,387	211
November	118,844	79,417	152,879	90,185	4,437	204
December	110,212	104,377	145,092	101,067	515	345
Total	1,420,640	1,117,559	2,483,862	1,406,528	31,308	7,137

Receipts at Duluth-Superior.

Receipts of coal by lake at Duluth-Superior Harbor during the season of 1924 were:

Month	Anthracite Net tons	Bituminous Net tons	Total Net tons
April	84,392	240,018	324,410
May	80,240	591,511	671,751
June	157,777	834,360	992,137
July	266,741	1,158,084	1,424,825
August	351,320	1,185,870	1,537,190
September	191,053	1,101,735	1,292,788
October	45,748	1,151,085	1,196,833
November	87,434	1,188,790	1,276,224
December	25,289	279,425	304,714
Total for season	1,289,994	7,730,878	9,020,872

Comparative statement at close of season for eight years:

Year	Anthracite Net tons	Bituminous Net tons	Total Net tons
1917	1,823,799	9,238,784	11,062,583
1918	1,699,473	9,721,440	11,390,913
1919	1,795,257	7,079,840	8,875,097
1920	1,637,477	7,393,219	9,030,696
1921	1,844,642	8,320,207	10,164,849
1922	566,362	5,138,934	5,705,296
1923	1,419,984	11,268,337	12,688,321
1924	1,289,994	7,730,878	9,020,872

Average total received during the past eight years—9,742,328 tons.

Clinchfield RR. Tonnage.

During the year 1924 and six years previous shipments of coal over the Clinchfield RR., formerly Carolina, Clinchfield & Ohio, by months, were:

Month	1918	1919	1920	1921	1922	1923	1924
January	212,211	238,107	389,927	285,725	280,411	364,515	291,535
February	269,472	272,558	298,106	207,409	307,343	298,863	325,261
March	239,709	258,225	339,469	255,602	321,819	352,320	334,542
April	213,103	243,040	334,681	251,445	355,740	388,816	268,776
May	224,765	365,597	310,006	237,442	354,777	394,113	250,671
June	236,207	324,405	335,750	235,315	375,620	357,322	252,750
July	239,986	348,919	358,543	291,224	281,122	363,944	327,422
August	219,936	326,959	376,615	285,646	269,908	300,330	289,815
September	282,325	371,680	379,507	300,651	290,156	395,503	332,958
October	279,441	300,629	443,403	325,339	255,672	365,768	392,128
November	251,581	367,404	374,375	352,466	348,919	335,948	375,428
December	278,133	369,979	321,045	298,000	279,575	351,127	439,433
Total	2,946,869	3,877,502	4,261,427	3,326,264	3,821,062	4,268,509	3,880,719

Mining Rates in the Kanawha District, 1904 to 1925.

	Apr. 1, 1904 to Mar. 31, 1906	Apr. 1, 1906 to Mar. 31, 1908	Apr. 1, 1908 to Mar. 31, 1910	Apr. 1, 1910 to Mar. 31, 1912	Apr. 1, 1912 to Mar. 31, 1914	Apr. 1, 1914 to Mar. 31, 1917
Kanawha Nos. 1 and 2 Gas Seams:						
Pick mining	.42½	.45	.45	.47½	.49	.49
Yds. pick entries and B.T.	.94½	1.00	1.00	1.05½	1.08½	1.08½
Machine mining in rooms	.21½	.22¾	.22¾	.24¾	.26	.26
Machine mining in entries	.26	.27½	.27½	.29¾	.31	.31
Cutting rooms and entries	.05½	.05¾	.05¾	.06¼	.06½	.06½
Kanawha Splint No. 5:						
Pick mining	.44½	.47	.47	.49½	.51	.51
Yards in pick entries	1.04	1.10	1.10	1.16	1.19	1.19
Machine loading in rooms	.22½	.23¾	.23¾	.25¾	.27	.27
Machine loading in entries	.26½	.28	.28	.30¼	.31½	.31½
Cutting rooms entries	.06 / .06¾	.06¾ / .07¼	.06¾ / .07¼	.06¾ / .07¾	.07 / .08	.07 / .08
Coalburg Seam:						
Pick mining	.49	.52	.52	.55	.56½	.56½
Yards pick entries	1.18	1.25	1.25	1.32	1.35	1.35
Machine mining in rooms	.27	.28¾	.28¾	.31¼	.32½	.32½
Machine mining in entries	.31	.33	.33	.35¾	.37	.37
Cutting rooms and entries	.06¼ / .07¼	.06¾ / .07¾	.06¾ / .07¾	.07¼ / .08¼	.07½ / .08¾	.07½ / .08¾
Cedar Grove:						
Pick mining	.49	.52	.52	.55	.56½	.56½
Yards in pick entries	.80¼	.85	.85	.89¾	.92	.92
Machine loading in rooms	.27	.28¾	.28¾	.31¼	.32½	.32½
Machine loading in entries	.31	.33	.33	.35¾	.37	.37
Cutting rooms and entries	.08¼ / .09¼	.08¾ / .09¾	.08¾ / .09¾	.09½ / .10¼	.09¾ / .10¾	.09¾ / .10¾
Day Labor:						
Drivers, single mule	1.80	1.90	1.90	2.00	2.05	2.05
Drivers, two mules	1.89	2.00	2.00	2.11	2.16	2.16
Track layers	2.12½	2.25	2.25	2.37	2.43	2.43
Track layers helpers	1.75	1.85	1.85	1.95	2.00	2.00
Slate shooters	1.98	2.10	2.10	2.22	2.28	2.28
Greasers	.95	1.00	1.00	1.05	1.08	1.08
Trappers	.75	.80	.80	.85	.87	.87
Spraggers and couplers	1.04	1.10	1.10	1.18	1.18	1.18
All other inside labor	1.75	1.85	1.85	2.00	2.00	2.00
Motor men and machine run.	2.22	2.35	2.35	2.55	2.55	2.55
Pick Pillar Coal:						
Gas						.40
Splint						.52½

	April 1, 1917 to Mar. 31, 1918	Suppl July 1, to Dec. 31, 1918	Suppl Nov. 1, 1917. Mar. 31, 1920	(Garfield Award 14%) Dec. 1, 1919 July 27, 1920 to Mar, 31, 1922	April 1, 1922 and Jackson-ville agreement April 1, 1924	Jan. 1, 1924 cpen shop
Kanawha Nos. 1 and 2 Gas Seams:						
Pick mining	.55½	.60½	.70½	.94½	.94½	.70½
Yds. pick entries and B.T.	1.08¼	1.08¼	1.24½	1.49½	1.49½	1.24½
Machine mining in rooms	.31½	.36	.44	.63	.63	.43
Machine mining in entries	.36½	.41	.49	.70	.70	.48
Cutting rooms and entries	.07½	.08	.10	.14	.14	.10
Kanawha Splint No. 5:						
Pick mining	.57½	.62½	.72½	.96½	.96½	.72½
Yards in pick entries	1.19	1.19	1.37	1.64½	1.64½	1.37
Machine loading in rooms	.32½	.37	.45	.64	.64	.44
Machine loading in entries	.37	.41½	.49½	.70¼	.70¼	.49
Cutting rooms entries	.08 .09	.08½ .09½	.10½ .11½	.14½ .15½	.14½ .15½	.10½ .11½
Coalburg Seam:						
Pick mining	.63	.68	.78	1.02	1.02	.78
Yards pick entries	1.35	1.35	1.55	1.86	1.86	1.55
Machine mining in rooms	.38	.42½	.50½	.69 3/10	.69 3/10	.49
Machine mining in entries	.42½	.47	.55	.7555	.7555	.54
Cutting rooms and entries	.08½ .09¾	.09 .10¼	.11 .12¼	.15 .16¼	.15 .16¼	.11 .12
Cedar Grove:						
Pick mining	.63	.68	.78	1.02	1.02	..
Yards in pick entries	.92	.92	1.05¾	1.27	1.27	..
Machine loading rooms	.38	.42½	.50½	.70½	.70½	..
Machine loading in entries	.42½	.47	.55	.76¾	.76¾	..
Cutting rooms and entries	.10¾ .11¾	.11¼ .12¼	.13¼ .14¼	.17¼ .18¼	.17¼ .18¼	.. ..
Day Labor:						
Drivers, single mule	2.75	3.05	4.45	5.45	*6.95	4.40
Drivers, two mules	2.91	3.21	4.61	5.61	*7.11	4.56
Track layers	2.84	3.14	4.54	5.54	*7.04	4.56
Track layers helpers	2.56	2.86	4.26	5.26	*6.76	4.24
Slate shooters	2.62	2.92	4.32	5.32	6.82	4.32
Greasers	1.25	1.55	2.30	2.83	3.65	2.32
Old men trappers	...	...	...	4.20	5.02	3.20
Trappers	1.25	1.55	2.30	2.83	3.65	2.32
Spraggers and couplers	1.50	1.80	2.55	3.08	3.90	2.56
All other inside labor	2.50	2.80	4.20	5.20	6.70	4.24
Motor men and machine run.	2.98	3.28	4.68	5.68	7.18	4.64
Pick Pillar Coal:						
Gas	.46½	.51½	.61½	.85½	...	.61½
Splint	.52½	.57½	.67½	.91½	...	.67½

*From August 16, 1920.

BITUMINOUS COAL EXPORTS

Decrease of Four Million Tons Compared with 1923—Big Loss to Canada and Europe.

Exports of bituminous coal from the United States to various countries throughout the world during 1924 and five years previous (in gross tons) were:

Country	1919	1920	1921	1922	1923	1924
Europe—						
Austria Hungary..	212	16,963	18,804	.....	.....	5,542
Azores and Madeira Islands	32,856	47,643	86,802	.....	.....	.....
Belgium	200	174,575	23,709	.....	81,500	15,325
Bulgaria	.....	.....	20,042	.....	.....	.....
Czechoslovakia	.....	.....	6,722	.....	.....	.....
Denmark	88,903	966,649	153,923	3	.....	.....
France	532,443	3,646,349	607,531	12,012	842,671	424,894
Roumania	.....	8,248	2	.....	.....	.....
Poland and Danzig		6,762	.....	.....	.....	.....
Finland	.....	27,883	821	.....	.....	.....
Germany	8,540	75,791	38,654	2,624	335,511	20,787
Gibraltar	14,338	82,341	126,268	.....	.....	.....
Greece	48,110	231,336	96,124	9,931	38,161	15,160
Iceland and Faroe Islands	.....	47,422	13,885	.....	.....	.....
Italy	1,632,994	2,357,734	1,549,460	124,083	578,626	870,666
Latvia	.....	.....	.....	.....	11,838	.....
Malta, Gozo and Cyprus Islands..	.....	.....	6,250	.....	.....	.....
Netherlands	722,991	2,146,937	334,090	4,057	378,936	.....
Norway	159,842	736,270	42,484	.....	2,539	.....
Portugal	35,878	164,414	100,179	1,269	.....	.....
Russia in Europe..	.....	61,713	87,338	.....	.....	.....
Spain	18,623	65,883	58,486	.....	36,597	5,192
Sweden	252,891	1,226,480	67,015	.....	51,622	.....
Switzerland	528,575	812,332	63,944	.....	.....	.....
Turkey	4,005	94,401	19,157	.....	.....	.....
United Kingdom—						
England	8,038	33,346	1,016,850	145	24,773	5,181
Ireland	.....	.....	405,640	.....	.....	.....
Scotland	.....	19,732	74,396	.....	17,961	.....
	4,089,439	13,001,137	4,984,574	154,124	2,401,134	1,362,747
North America—						
British Honduras..	601	1,129	696	1,696	1,358	383
Canada	10,670,490	14,481,844	13,915,377	9,677,320	15,037,454	11,395,760
Costa Rica.....	1,717	13,707	3,226	2,205	2,985	3,425
Guatemala	3,893	1,054	1,778	598	120	560

Country	1919	1920	1921	1922	1923	1924
Honduras	8,367	15,670	14,140	5,814	1,535	1,923
Nicaragua	2,026	919	1,826	874	3,548	5,348
Panama	72,097	155,042	122,829	108,193	19,265	122,545
Salvador	2,243	8,840	39	30	3	64
Greenland	1,217	1,052	710	200	.....	.....
Mexico	101,585	204,991	172,211	91,056	94,648	74,092
Miquelon, etc	.....	2,000	.....	.....	8,458	3,330
Newfoundland and Labrador	8,418	25,397	4,880	2,132	33,583	90,106
West Indies—						
Bermuda	19,438	49,153	32,802	14,257	15,121	18,041
Barbados	103,424	73,461	19,763	18,664	23,452	34,947
Jamaica	33,038	82,455	58,652	27,704	31,281	41,109
Trinidad & Tobago	28,038	48,347	7,766	12,445	21,306	25,291
Other British W. I.	28,038	48,347	7,766	12,445	22,210	16,992
Cuba	971,399	1,322,632	523,572	463,858	610,619	534,751
Danish	13,877	2,212	.....	.....	.....	.....
Dominican Republic	13,693	12,260	8,443	7,047	4,156	3,218
Dutch	24,694	40,377	12,201	28,870	58,823	35,649
French	23,934	45,461	55,821	53,995	77,006	131,552
Haiti	.....	1	71	3	2,617	209
Virgin Islands	469	40,159	23,720	14,003	31,333	45,343
	12,135,977	16,636,600	12,844,066	10,548,580	16,112,301	12,587,488
South America—						
Argentina	483,389	1,746,007	746,439	78,971	130,765	196,480
Bolivia	.....	.....	.....	.....	521	.....
Brazil	642,109	966,029	527,225	152,976	303,412	759,138
Chile	123,860	494,121	150,844	46,916	19,629	55,304
Colombia	11,835	6,318	11,488	5,627	4,055	1,389
Ecuador	2,948	4,226	4,222	4,119	1,998	3,063
Falkland Islands	15,208	3,073	.....	.....	.....	.....
Guiana:						
British	3,846	15,934	3,447	3,252	10,966	16,352
Dutch	1,001	2,896	2,462	1,901	2,374	2,601
French	.....	.....	.....	.....	.....	267
Peru	45,819	35,382	28,152	13,829	10,020	19,116
Paraguay	.....	6,945	.....	.....	.....	.....
Uruguay	194,197	267,807	80,390	.....	29,295	61,431
Venezuela	496	2,825	6,649	23	4,144	2,320
	1,524,703	3,551,563	1,569,318	307,614	517,179	1,117,461
Asia—						
Far Eastern Republic	.....	.....	.....	11	.....	.....
China	.....	10	6,556	11	.....	3,888
Aden	.....	15,869	.....	.....	.....	.....
Turkey	.....	11,746	17,127	.....	2,519	.....
Dutch East Indies	13,221	.....	7,788	.....	.....	.....

Country	1919	1920	1921	1922	1923	1924
Japan	.....	.....	.....	.....	.....	1,766
British India	.....	.....	.....	.....	.....	1,016
Palestine and Syria	.....	.....	6,781	.....	.....	.....
Russia in Asia	3	5	40	8	.....	1
Oceania—	13,221	64,274	31,511	30	2,519	6,671
Other British	5	.....	10	.....	.....	1,707
Philippine Islands	.....	1	8,535	.....	.....	5,750
Australia	.....	.....	.....	.....	16,547	.....
New Zealand	50,034	35,641	59,831	.....	1,417	3,883
Dutch	.....	1,103	.....	.....	.....	6,590
Java and Madeira	.....	.....	.....	.....	.....	1,390
French	.....	.....	.....	.....	.....	1
Africa—	50,040	36,745	68,376	.....	17,964	19,321
British Africa:						
West	4,159	3,553	6,642	30	1,021	5,589
South	16,100	.....	.....	.....	.....	.....
East	16,100	.....	.....	.....	.....	.....
Algeria	.....	.....	.....	7,026	69,683	34,696
Kamerun, etc	.....	6,396	.....	.....	.....	.....
Italian	5,166	.....	.....	.....	.....	.....
Canary Islands	1,819	58,646	172,297	1,591	2,189	.....
Egypt	37,543	626,530	476,200	52,118	22,966	41,290
French Africa	52,001	239,156	182,809	20,198	14,027	59,022
Morocco	.....	.....	12,685	.....	.....	.....
Portuguese Africa	55,430	32,408	59,182	.....	.....	.....
	174,286	976,561	899,811	80,963	109,886	140,597
Grand Total	17,987,666	34,269,735	20,660,933	11,083,112	19,160,983	15,234,285
Recapitulation—						
Europe	4,089,439	13,011,137	4,985,574	154,124	2,401,134	1,362,747
North America	12,135,977	16,636,600	12,853,867	10,548,580	16,112,301	12,587,488
South America	1,524,703	3,551,563	1,569,318	307,614	517,179	1,117,461
Asia	13,221	64,274	31,551	30	2,519	6,671
Oceania	50,040	36,745	68,876	.....	17,964	19,321
Africa	174,286	976,561	912,615	80,963	109,886	140,597
Grand Total	17,987,666	34,269,735	20,660,933	11,083,112	19,160,983	15,234,285

Lehigh & Susquehanna RR. Anthracite Shipments.

From	1924	Distributed as follows:	1924
Wyoming Region	4,698,238	East of Mauch Chunk by rail	7,001,020
Upper Lehigh Region	225,342	East of Mauch Chunk by canal	103,246
Beaver Brook Region	651,602	To connecting lines above Mauch Chunk	117,523
Mauch Chunk Region	1,004,498	On line above Mauch Chunk	222,671
Schuylkill Region	864,576	Total	7,444,462
L. V. R. R. at Allentown	.....		
L. V. R. R. at Packerton	204		
Total	7,444,462		

Imports and Exports of Coal and Coke.

Below is a statement of business done in shipment of coal from and to the United States in fiscal years ending June 30th:

Years (All gross tons)	Exports, Anthracite	Exports, Bituminous	Imports, Bituminous
1914	3,959,114	15,704,966	1,358,002
1915	3,682,188	14,412,995	1,529,608
1916	3,878,478	18,749,684	1,618,539
1917	4,635,134	19,533,705	1,282,790
1918	4,842,109	21,052,057	1,391,535
1919	4,285,824	18,152,243	1,008,250
1920	4,717,462	22,976,325	1,062,889
1921	4,877,800	34,423,964	1,019,592
1922	2,992,385	13,035,800	1,244,945
1923	4,544,766	10,154,981	1,680,630
1924	3,588,036	15,262,739	374,517

Coke exported in 1912, 912,576 tons; in 1913, 881,603 tons; in 1914, 592,487 tons; in 1915, 799,444 tons; in 1916, 1,048,790 tons; in 1917, 1,258,321 tons; in 1918, 1,506,986 tons; in 1919, 640,139 tons; in 1920, 821,252 tons; in 1921, 273,888 tons; in 1922, 456,733 tons; in 1923, 1,104,770 tons; in 1924, 588,705 tons.

Under the reciprocal policy of the most recent tariff act there is no import duty on coal from Great Britain, but since September 22, 1922, there has been a charge on coal from Canada of 14 cents for mine run and 53 cents for lump. Slack and coke are admitted free.

Bituminous was dutiable previous to October 1, 1913, when put on free list, but became dutiable September 22, 1922, as stated above, with respect to countries not admitting our coal free.

Details of fuel exports in calendar years 1922 and 1923 are given below:

Exports	Anthracite		Bituminous	
	1923	1924	1923	1924
To Canada	4,454,419	3,540,062	15,037,454	11,395,760
France	4,274	598	842,671	424,894
Netherlands	.....	.....	378,936	.....
Sweden	.....	.....	51,622	.....
British West Indies	245	155	98,249	16,992
Italy	.....	.....	585,085	870,666
Panama	.....	350	19,265	122,545
Mexico	3,781	15,884	94,648	74,092
Cuba	62,643	6,389	610,619	534,751
Other West Indies	.....	.....	169,986	352,351
Brazil	.....	5	310,724	759,138
Argentina	75	.....	131,065	195,480
Chili	451	5	19,629	55,304
Other countries	18,878	.....	.....	.....
Total*	4,544,766	3,588,036	19,154,981	15,234,285

*Does not include fuel or bunker coal laden on vessels engaged in the foreign trade, which aggregated during the 12 months as follows: 1917, 6,883,176 tons; 1918, 5,626,175; 1919, 7,342,734; 1920, 9,362,178; 1921, 7,547,518 tons; 1922, 4,115,872 tons; 1923, 4,547,343 tons; 1924, 3,988,541 tons.

COAL AND COKE SHIPMENTS BY CUSTOMS DISTRICTS

Large Decrease Shown in 1924 Compared with Year 1923.

Below is a statement for the calendar years 1923 and 1924 which shows in concise form the business done in coal and coke from each of the several customs districts in gross tons:

	Anthracite		Bituminous		Coke	
	1923	1924	1923	1924	1923	1924
Philadelphia	52,956	65,311	303,146	146,836	136,545	6,647
Maryland	9,302	.....	1,379,355	583,642	170,091	34,012
New York	76,269	98,635	14,888	29,941	13,006	25,234
South Carolina	3,084	.....	234,301	121,168	.....	133
Virginia	6,956	.....	2,334,574	3,135,036	11,752	802
Mobile	.....	77	9,107	44,155	7,715	3,335
New Orleans	52	75	6,725	5,825	12,110	12,752
Arizona	377	13,064	36,401	24,919	55,253	4,627
El Paso	1,722	1,791	33,174	30,137	9,497	142
San Francisco	35	19	2,354	140	99	65
San Diego	1	.....	29	.....	1	.....
Los Angeles	155	56	80	179	64	6
Washington	2,308	3,991	13,261	40,129	20	1,131
Florida	147	3	32,161	3,575	5,440	5,314
Sabine	.....	21	30	.....	5,994	15,304
Galveston	.....	.....	.....	.....	.....	440
Georgia	.....	.....	.....	.....	.....	515
San Antonio	1,435	949	2,453	2,248	3,377	788
Buffalo	2,339,029	1,982,420	3,453,419	2,668,176	357,676	246,395
Dakota	36,044	24,113	78,557	90,189	22,644	37,753
Duluth-Superior	20,251	8,753	55,731	63,618	2,584	5,177
Michigan	7,047	8,632	1,719,923	1,155,191	173,189	161,299
Ohio	35,474	15,096	6,342,868	5,118,624	58,588	77,256
Rochester	457,530	256,794	655,366	568,993	1,580	191
St. Lawrence	1,420,640	1,117,559	2,483,862	1,366,528	31,308	7,137
Vermont	12,610	4,026	14,216	3,715	13,516	8,445
Maine & N. H.	364	118	10,293	4,336	4,137	2,876
Massachusetts	362	417	303	132	25	.....
Connecticut	43	40	.....	.....	.....	.....
Montana & Idaho	.....	.....	.....	5,709	.....	68
Oregon	.....	.....	30	202	.....	.....
Alaska	.....	.....	.....	538	.....	.....
Porto Rico	.....	1	.....	55	.....	.....
Total to Canada	4,454,419	3,540,062	15,037,454	11,395,760	667,220	546,461
Total	4,544,766	3,588,036	19,154,881	15,262,739	1,102,376	588,705

Exports of bituminous coal from Mobile during 1924 amounted to 44,155 tons. Anthracite tonnage was 77, coke 3,335 and foreign bunker 74,986 tons.

American and British Bituminous Exports.

Exports of bituminous coal from the United States and Great Britain, by months of 1922, 1923 and 1924, were:

	United States			Great Britain		
Month	1922	1923	1924	1922	1923	1924
January	643,913	1,092,084	1,045,587	3,864,986	5,396,885	5,223,283
February ...	813,587	805,973	1,262,838	3,879,963	5,716,475	4,308,932
March	1,187,313	1,219,970	1,111,752	5,078,055	6,982,880	4,882,618
April	714,995	1,384,879	942,638	3,961,658	6,556,016	4,857,003
May	399,551	2,249,001	1,231,740	4,811,946	7,380,698	5,197,959
June	540,550	2,418,769	1,513,899	4,567,497	6,257,075	4,606,492
July	366,287	2,278,241	1,630,849	4,816,498	6,431,872	5,180,751
August	425,530	2,117,084	1,392,862	5,887,671	6,291,195	4,809,521
September ..	1,175,007	1,768,620	1,502,829	6,831,484	6,057,071	4,809,448
October	1,729,425	1,488,887	1,534,459	5,930,108	7,139,291	4,646,087
November ..	1,618,037	1,253,445	974,346	6,300,237	6,400,686	4,461,175
December ..	1,468,917	1,078,028	1,090,486	5,748,106	5,656,220	4,893,441
Total	11,083,112	19,154,981	15,234,285	61,678,189	76,267,864	58,567,586

Bunker Coal to Vessels in Foreign Trade.

Bunker coal loaded (monthly) on vessels engaged in foreign trade for 1924 and five years previous was:

Month	1919	1920	1921	1922	1923	1924
January	487,998	616,905	721,907	378,654	320,495	323,419
February ...	417,841	512,886	577,315	358,544	314,948	335,224
March	457,413	771,602	608,607	414,952	361,747	302,831
April	682,592	696,017	241,054	401,172	346,487	347,471
May	670,001	767,346	803,903	420,486	457,700	369,902
June	672,669	836,453	811,938	365,282	435,433	341,210
July	659,155	820,382	786,063	321,742	430,213	346,316
August	767,905	866,235	641,311	260,408	451,962	316,772
September ..	783,807	830,789	513,598	260,293	392,528	312,433
October	724,024	973,369	469,567	294,643	369,199	351,516
November ..	613,851	845,495	413,811	331,643	351,016	289,228
December ..	505,478	824,699	449,957	312,388	310,655	352,419
Total	7,342,734	9,362,178	7,547,518	4,120,207	4,547,343	3,988,541

An interesting development in 1924 was a marked shifting in production from the union to the non-union fields. Whereas in the past approximately sixty per cent of the total output has come from union fields and forty per cent from non-union fields, during the past year those proportions have been practically reversed. The explanation is to be found in the abnormally high wage rates prevailing in the union fields as a result of the Jacksonville agreement.

FOREIGN HOLIDAYS

Dates Celebrated by Natives of Countries Largely Represented as Workers in the Coal Mines.

The matter of miners' holidays, particularly the days off taken by foreign miners, is frequently a matter of comment and consideration in the coal trade.

We give below a tabulation of the holidays scheduled for 1925 in certain of the foreign countries. Our records show that the great bulk of the foreign-born miners come from Austria, Hungary, Italy, Czechoslovakia, Poland, Esthonia, Finland and Latvia. It is probable that all of these days will be observed by the representatives of those nationalities employed at the mines.

Holidays of the Foreign Born.

January 6th, Epiphany—General.
January 7th and 8th, Christmas holidays—Jugoslavia, Lithuanian.
January 19th, Theophany—Jugoslavia.
January 27th, St. Sava—Jugoslavia.
February 2d, Candlemas Day—Polish, Austrian and Hungarian.
February 16th, National Festival—Lithuanian.
February 24th, Independence—Esthonian.
March 4th, Day of Penance—Esthonian.
March 15th, National Holiday—Hungarian.
March 25th, Assumption—Austrian, Czechoslovakia.
March 25th, Annunciation—Polish, Hungarian and Finnish.
April 11th, Sanction of 1848 Law of Independence—Hungarian.
April 9th, Holy Thursday—Austrian and Latvian.
April 10th, Good Friday—General.
April 11th, Holy Saturday—Slavonian.
April 13th, Easter Monday—General.
April 14th, Easter Tuesday—Latvian and Esthonian.
April 17th, Good Friday—O. S. Jugoslavia.
April 20th, Easter Monday—O. S. Jugoslavia.
April 21st, Easter Tuesday—O. S. Jugoslavia.
May 1st, Jubilee of Constitutional Assembly—Latvian.
May 1st, Labor Day—Finnish, Esthonian, Austrian and Slavonian.
May 3d, Constitution Day—Polish.
May 8th, St. Stanislas—Polish.
May 16th, St. John of Nepomuch, Slavonian.
May 21st, Ascension Day—General.
May 28th, Ascension Day.—O. S. Jugoslavia.
May 30th, Saturday before Whit Sunday.—Austrian, Czechoslovakia—Slavonian.
June 1st, Whit Monday—Austrian, Czechoslovakia.
June 2d, Whit Tuesday—Latvian and Esthonian.
June 8th, Whit Monday—O. S. Jugoslavia.
June 9th, Whit Tuesday—O. S. Jugoslavia.
June 11th, Corpus Christi—Hungarian, Polish and Austrian.

June 22d, Victory of Zehsis—Latvian.
June 24th, St. John's Day—Esthonian.
June 29th, Sts. Peter and Paul—Austrian, Polish and Hungarian.
July 6th, Martyrdom of John Huss—Slavonian.
August 15th, Assumption—Austrian, Italian, Hungarian and Polish.
August 19th, Transfiguration—O. S. Jugoslavia.
August 20th, St. Stephen of Hungary—Hungarian.
August 28th, Assumption—O. S. Jugoslavia.
September 8th, Nativity—Austrian, Polish and Hungarian.
September 20th, National Holiday—Italian.
October 28th, Independence—Slavonian.
October 31st, Day of Reformation—Latvian.
November 1st, All Saints' Day—General.
November 12th, National Holiday—Austrian.
November 15th, St. Leopold—Austrian.
December 6th, Independence—Finnish.
December 8th, Immaculate Conception—Austrian, Polish and Hungarian.
December 26th, St. Stephen—Hungarian, Italian and Slavonian.
December 26th, Day after Christmas—Polish.
December 26th, St. Stephen—Austrian and Finnish.
December 26th, Christmas Holiday—Esthonian and Latvian.
December 27th, Christmas Holiday—Latvian and Esthonian.

Pittsburgh, Shawmut & Northern RR. Shipments.

Following is a statement showing by months for the year 1924, total number of revenue bearing tons of bituminous coal originating on Pittsburgh, Shawmut & Northern and total number of tons received from connecting carriers. Also the number of non-revenue tons originating on Pittsburgh, Shawmut & Northern and total tonnage.

Month	Revenue Originating on P. S. & N.	Received from Connecting Carriers	Total	Non-revenue	Total all Tonnage
January	35,238	33,653	68,891	3,683	72,574
February	31,159	28,724	59,883	3,807	63,690
March	30,505	23,944	54,449	3,886	58,335
April	20,064	29,883	49,947	2,460	52,407
May	22,835	29,058	51,893	3,143	55,036
June	30,687	43,072	73,759	3,541	77,300
July	29,134	29,632	58,766	2,241	61,007
August	30,753	36,624	67,377	3,087	70,464
September	40,637	38,404	79,041	3,713	82,754
October	56,700	45,311	102,011	5,010	107,021
November	44,875	47,338	92,213	2,840	95,053
December	52,263	64,058	116,321	4,607	120,928
Total	424,850	449,701	874,551	42,018	916,569

During the year 1924 Great Britain exported 2,471,856 tons of coal to the Irish Free State, compared with 1,485,425 tons in 1923.

Bituminous Coal Loaded for Shipment in the United States in 1923, by Railroads and Waterways* (Net Tons).

By courtesy of U. S. Geological Survey we are able to present advance figures relative to bituminous tonnage movement in the year 1923.

Route	State	Total
Akron, Canton & Youngstown	Ohio	33,710
Alabama Central	Alabama	85,755
Alabama Great Southern	Alabama	34,374
Ashland Coal & Iron Co.	Kentucky	141,311
Atchison, Topeka & Santa Fe	Colorado	589,504
	Illinois	366,592
	Kansas	949,180
	Missouri	536,842
	New Mexico	1,647,160
	Oklahoma	68,669
		4,157,947
Atlanta, Birmingham & Atlantic	Alabama	162,277
Ballard & Tompson	Utah	83,749
Baltimore & Ohio	Illinois	1,629,584
	Indiana	413,649
	Kentucky	122,666
	Maryland	48,600
	Ohio	10,552,029
	Pennsylvania	8,683,451
	West Virginia	20,785,050
		42,235,029
Bessemer & Lake Erie	Pennsylvania	4,546,404
Bevier & Southern	Missouri	409,671
Big Sandy & Kentucky River	Kentucky	33,946
Buffalo & Susquehanna	Pennsylvania	1,601,790
Buffalo Creek & Gauley	West Virginia	600,190
Buffalo, Rochester & Pittsburgh	Pennsylvania	6,917,822
Cambria & Indiana	Pennsylvania	3,065,137
Campbell's Creek	West Virginia	617,609
Carolina, Clinchfield & Ohio	Kentucky	96,255
	Virginia	2,690,974
		2,787,229
Central Indiana	Indiana	28,900
Central of Georgia	Alabama	1,130,260
	Georgia	48,172
		1,178,432
Chattanooga & Montlake	Tennessee	37,152
Cheat Haven & Bruceton	West Virginia	296,263
Chesapeake & Ohio	Kentucky	4,142,397
	West Virginia	28,329,164
		32,471,561

*Roads carrying under 25,000 tons omitted.

Route	State	Total
Cheswick & Harmar	Pennsylvania	501,955
Chicago & Alton	Illinois	4,658,346
	Missouri	88,041
		4,746,387
Chicago & Eastern Illinois	Illinois	5,184,577
	Indiana	5,729,214
		10,913,791
Chicago & Illinois Midland	Illinois	2,319,379
Chicago & Northwestern	Illinois	4,165,054
	Iowa	1,138,783
	Wyoming	185,859
		5,489,696
Chicago, Burlington & Quincy	Colorado	449,898
	Illinois	12,712,110
	Iowa	489,975
	Missouri	337,784
	Wyoming	1,455,164
		15,444,931
Chicago, Indianapolis & Louisville	Indiana	1,616,143
Chicago, Milwaukee & St. Paul	Illinois	780,502
	Indiana	6,793,225
	Iowa	866,115
	Missouri	66,582
	Montana	993,747
	North Dakota	103,081
	South Dakota	2,000
	Washington	34,964
		9,640,216
Chicago, Peoria & St. Louis	Illinois	460,790
Chicago, Rock Island & Pacific	Arkansas	28,405
	Colorado	34,546
	Illinois	43,035
	Iowa	1,348,933
	Missouri	47,839
	Oklahoma	898,511
	Texas	21,279
		2,422,548
Cincinnati, Indianapolis & Western	Illinois	107,226
	Indiana	213,115
		320,341
Cincinnati, New Orleans & Texas Pacific	Tennessee	75,884
Cleveland, Cincinnati, Chicago & St. Louis	Illinois	7,143,766
	Indiana	934,519
		8,078,285
Colfax Northern	Iowa	81,852
Colorado & Southern	Colorado	2,346,995
Colorado & Wyoming	Colorado	380,236
Colorado Southeastern	Colorado	514,858

Route	State	Total
Colorado, Wyoming & Eastern	Colorado	55,500
Cumberland	Kentucky	114,726
Cumberland & Manchester	Kentucky	180,583
Cumberland & Pennsylvania	Maryland	1,221,554
	Pennsylvania	16,961
		1,238,515
Dardanelle & Russellville	Arkansas	59,821
Dent's Run	Pennsylvania	26,492
Denver & Intermountain	Colorado	139,706
Denver & Rio Grande Western	Colorado	2,928,478
	New Mexico	32,310
	Utah	2,572,532
		5,533,320
Denver & Salt Lake	Colorado	745,808
Des Moines & Central Iowa	Iowa	190,167
Detroit, Toledo & Ironton	Ohio	126,897
East Broad Top R.R. & Coal Co.	Pennsylvania	555,124
East St. Louis & Suburban	Illinois	483,873
Elgin, Joliet & Eastern	Illinois	158,377
El Paso & Southwestern	New Mexico	682,294
Erie	Ohio	174,234
	Pennsylvania	1,839,790
		2,014,024
Evansville & Ohio Valley	Indiana	66,992
Evansville, Indianapolis & Terre Haute	Indiana	1,378,709
Evansville, Suburban & Newburgh	Indiana	132,820
Federal Valley	Ohio	86,374
Fort Dodge, Des Moines & Southern	Iowa	63,085
Fort Smith & Western	Oklahoma	99,296
Grand Prairie Branch	Arkansas	40,538
Great Northern	Montana	682,284
	North Dakota	286,576
	Washington	170,050
		1,138,910
Greenbrier & Eastern	West Virginia	607,452
Harriman & Northeastern	Tennessee	290,802
Hartland	West Virginia	89,730
Hocking Valley	Ohio	3,479,957
Houston & Texas Central	Texas	134,964
Houston East & West Texas	Texas	98,550
Huntingdon Broad Top Mountain	Pennsylvania	656,447
Illinois Central	Alabama	200,272
	Illinois	15,733,696
	Indiana	547,610
	Kentucky	6,155,425
		22,637,003
Illinois Traction System	Illinois	990,538
Indian Creek & Northern	West Virginia	51,263

Route	State	Total
Indian Creek Valley	Pennsylvania	245,245
International & Great Northern	Texas	179,491
Interstate	Kentucky	171,000
	Virginia	2,525,791
		2,696,791
Iowa Southern Utilities Co.	Iowa	76.340
Johnstown & Stony Creek	Pennsylvania	195,057
Kanawha & Michigan	Ohio	605,642
	West Virginia	321,824
		927,466
Kanawha & West Virginia	West Virginia	81,637
Kanawha Central	West Virginia	40,269
Kanawha, Glen Jean & Eastern	West Virginia	633,322
Kansas City Southern	Kansas	390,277
	Missouri	213,964
	Oklahoma	90,040
		694,281
Kansas, Oklahoma & Gulf	Oklahoma	219,204
Kentucky & Tennessee	Kentucky	784,593
Kentucky & West Virginia Power Co.	West Virginia	42,009
Lake Erie, Franklin & Clarion	Pennsylvania	555,566
Ligonier Valley	Pennsylvania	639,939
Litchfield & Madison	Illinois	1,183,285
Long Fork	Kentucky	926,574
Louisville & Nashville	Alabama	4,557.027
	Illinois	838,299
	Kentucky	23,060,179
	Tennessee	971,131
	Virginia	267,084
		29,693,720
Louisville, Henderson & St. Louis	Kentucky	175,711
Louisiana Ry. & Navigation Co. of Texas	Texas	44,065
M. E. McNeals	Pennsylvania	30,608
Marion & Eastern	Illinois	87,600
Michigan Central	Michigan	579.235
Midland Valley	Arkansas	251.561
	Oklahoma	150 740
		402,301
Miller's Creek	Kentucky	356.143
Minneapolis & St. Louis	Illinois	644.082
	Iowa	403.605
		1,047.687
Minneapolis, St. Paul & Sault Ste. Marie	North Dakota	277.446
Missouri-Illinois	Illinois	389.131
Missouri-Kansas-Texas	Kansas	83,554
	Missouri	91,428
	Oklahoma	452,524
	Texas	181,362
		808,868

Route	State	Total
Missouri Pacific	Arkansas	581,849
	Illinois	3,487,105
	Kansas	1,119,321
	Missouri	778,851
	Oklahoma	21,925
		5,989,051
Mobile & Ohio	Alabama	696,795
	Illinois	641,293
		1,338,088
Monongahela	Pennsylvania	3,162,747
	West Virginia	4,489,602
		7,652,349
Montana	Arkansas	32,885
Montana, Wyoming & Southern	Montana	417,388
Montour	Pennsylvania	5,562,085
Morgan & Fentress	Tennessee	35,913
Morgantown & Kingwood	West Virginia	173,470
Morgantown & Wheeling	West Virginia	717,238
Nashville, Chattanooga & St. Louis	Alabama	432
	Tennessee	1,213,063
		1,213,495
New Haven & Dunbar	Pennsylvania	86,674
New Mexico Midland	New Mexico	89,275
New York Central	Ohio	4,222,902
	Pennsylvania	7,410,259
	West Virginia	2,562,662
		14,195,823
New York, Chicago & St. Louis	Illinois	699,779
	Indiana	8,453
		708,232
Norfolk & Western	Kentucky	3,853,774
	Ohio	6,890
	Virginia	2,666,623
	West Virginia	23,587,909
		30,115,196
Norfolk & Southern	North Carolina	29,419
Northern Alabama	Alabama	577,876
Northern Pacific	Montana	841,410
	North Dakota	461,215
	Washington	1,784,709
		3,087,334
Norton & Northern	Virginia	84,780
Ohio & Kentucky	Kentucky	28,237
Oregon Short Line	Wyoming	1,379,734
Oregon-Wash. R.R. & Navigation Co	Washington	249,750
Owensboro & Nashville	Kentucky	174,760
Pacific Coast	Washington	425,558

Route	State	Total
Pennsylvania (includes Ohio Riv. & West., and Pitts., Cinc., Chic. & St. Louis)	Illinois	1,007,435
	Indiana	5,468,307
	Ohio	8,311,118
	Pennsylvania	59,272,058
	West Virginia	1,285,291
		75,344,209
Peoria & Pekin Union	Illinois	567,647
Peoria, Hanna City & Western	Illinois	620,199
Pere Marquette	Michigan	502,613
Peru, La Salle & Deer Park	Illinois	61,257
Pittsburgh & Lake Erie	Pennsylvania	6,353,614
Pittsburgh & Shawmut	Pennsylvania	1,632,556
Pittsburgh & Susquehanna	Pennsylvania	200,786
Pittsburgh & West Virginia	Ohio	590,951
	Pennsylvania	1,853,569
	West Virginia	439,023
		2,883,543
Pittsburgh, Chartiers & Youghiogheny	Pennsylvania	842,391
Pittsburgh, Lisbon & Western	Ohio	22,646
	Pennsylvania	153,267
		175,913
Pittsburgh, Shawmut & Northern	Pennsylvania	560,385
Preston	Maryland	8,963
	West Virginia	88,920
		97,883
Quincy, Omaha & Kansas City	Missouri	47,840
Reynoldsville & Falls Creek	Pennsylvania	237,309
Rio Grande & Eagle Pass	Texas	42,913
Rio Grande Southern	Colorado	58,047
Rock Island Southern	Illinois	119,903
Rural Valley	Pennsylvania	971,997
St. Louis & Belleville Electric	Illinois	321,504
St. Louis & O'Fallon	Illinois	720,822
St. Louis & Ohio River	Illinois	301,199
St. Louis-San Francisco	Alabama	2,572,799
	Arkansas	236,554
	Kansas	1,251,351
	Missouri	294,988
	Oklahoma	712,249
		5,067,941
St. Louis, Southwestern	Texas	168,855
St. Louis, Southwestern of Texas	Texas	59,931
St. Louis, Troy & Eastern	Illinois	759,259
San Antonio & Aransas Pass	Texas	41,900
San Antonio Southern	Texas	27,306
Sandy Valley & Elkhorn	Kentucky	1,474,019
Sante Fe, Raton & Eastern	New Mexico	121,426
Scotts Run	West Virginia	3,302,119

Route	State	Total
Sewell Valley	West Virginia	244,201
Southern	Alabama	4,623,697
	Illinois	618,221
	Indiana	1,617,711
	Kentucky	758,297
	Tennessee	2,205,758
	Virginia	2,050,333
		11,874,017
Springfield Terminal	Illinois	245,128
Strouds Creek & Muddlety	West Virginia	37,000
Tennessee	Tennessee	229,545
Tennessee Central	Tennessee	536,506
Tennesse Coal, I. & RR. Co	Alabama	3,084,901
Texas & Pacific	Texas	81,354
Texas Short Line	Texas	57,041
Thomas & Sayreton	Alabama	435,256
Toledo & Ohio Central	Ohio	1,532,138
Toledo, Peoria & Western	Illinois	258,192
Union	Pennsylvania	561,158
Union Pacific	Colorado	1,141,361
	Kansas	15,708
	Utah	42,962
	Wyoming	4,243,984
		5,444,015
Unity	Pennsylvania	642,485
Utah	Utah	1,480,050
Virginian	Virginia	7,106
	West Virginia	7,764,930
		7,772,036
Wabash	Illinois	2,798,872
	Iowa	368,647
	Missouri	169,170
		3,336,689
Wabash, Chester & Western	Illinois	490,898
Washington Run	Pennsylvania	390,806
Western Allegheny	Pennsylvania	438,434
Western Maryland	Maryland	890,556
	Pennsylvania	694,851
	West Virginia	3,504,320
		5,089,727
West Side Belt	Pennsylvania	1,869,202
West Virginia Northern	West Virginia	339,907
Wheeling & Lake Erie	Ohio	5,498,366
Woodstock & Blocton	Alabama	166,383
Woodward Iron Co.	Alabama	1,056,347
Youngstown & Ohio River	Ohio	544,944
Zanesville & Western	Ohio	1,279,461
Total railroad shipments		488,715,081

Waterways	State	Total
Allegheny River	Pennsylvania	732,891
Big Sandy River	West Virginia	76
Coquille River	Oregon	1 250
Green River	Kentucky	35,357
Illinois River	Illinois	16,349
Kanawha River	West Virginia	812,824
Kentucky River	Kentucky	44,910
Monongahela River	Pennsylvania	14,525,841
Muskingum River	Ohio	559
Ohio River	Indiana	2,282
	Kentucky	264,808
	Ohio	172,008
	Pennsylvania	10,243
	West Virginia	105,854
		555,195
Warrior River	Alabama	132,683
Total waterway shipments		16,884,799
Grand total		505,599,880

Virginian Railway Shipments.

Shipments of bituminous coal, for revenue and company use, over the Virginian Ry. during the calendar years 1923 and 1924 were:

Month	Revenue		Company		Total	
	1923	1924	1923	1924	1923	1924
January	614,529	555,946	48,473	45,587	663,002	601,533
February	576,670	643,028	40,796	51,616	617,466	694,644
March	796,851	563,479	49,640	54,497	846,491	617,976
April	712,064	440,316	46,110	38,661	758,174	478,977
May	813,843	509,520	50,246	48,471	864,089	557,991
June	659,129	561,715	41,623	37,687	700,752	599,402
July	658,847	517,054	40,114	41,870	698,961	558,924
August	644,913	563,128	41,415	39,200	686,328	602,328
September	655,347	603,228	41,189	44,941	696,536	648,069
October	598,846	746,544	40,241	50,375	639,087	796,919
November	284,827	645,729	33,849	51,638	318,676	697,367
December	363,318	533,195	42,499	46,503	405,817	579,698
Total	7,379,184	6,882,882	516,195	551,046	7,895,379	7,433,928

The Massachusetts Special Committee on the Necessaries of Life, in a report, says: "From the study of oil importation figures, the commission estimates that New England in 1924 received the coal equivalent in oil of about 4,000,000 tons. This is about the same total as for the preceding year. In arriving at this conclusion, the commission considered that the low price of bituminous coal in 1924 probably restricted the competition of oil, and that the greater use of furnace oil competing with high-priced anthracite offset the shrinkage in the use of oil for industrial purposes."

COAL PIER CAPACITIES—ATLANTIC PORTS

	Kind of coal	Daily capacity		Hours
New York.				
B. & O. RR.				
St. George	Bituminous	8,000	tons	24
Arlington	Bituminous	16,000	"	24
Berwind-White C. M. Co.				
Harsimus	Bituminous	10,000	"	10
C. RR. of N. J.				
Pier 18, Jersey City	Anthracite and Bituminous	25,000	"	10
Communipaw	Anthracite and Bituminous	1,500	"	10
Port Liberty	Bituminous	3,000	"	10
Elizabethport	Anthracite and Bituminous	10,000	"	10
D., L. & W. RR.				
Hoboken	Anthracite	15,000	"	10
Erie RR.				
Undercliff	Anthracite and Bituminous	12,500	"	16
L. V. RR.				
Perth Amboy	Anthracite	12,500	"	10
N. Y., O. & W. Ry.				
Weehawken	Anthracite	7,500	"	10
Pennsylvania RR.				
South Amboy	Anthracite and Bituminous	17,500	"	10
Reading (Port Reading RR.)				
Port Reading	Anthracite and Bituminous	22,500	"	10
Total, New York		161,000	"	..
Philadelphia.				
Pennsylvania RR.				
Greenwich	Anthracite and Bituminous	10,000	"	10
Reading Ry.				
Port Richmond	Anthracite and Bituminous	20,000	"	20
Total, Philadelphia		30,000	"	..
Baltimore.				
B. & O. RR.				
Curtis Bay	Bituminous	50,000	"	24
Locust Point	Bituminous	3,500	"	24
Pennsylvania RR.				
Canton	Anthracite and Bituminous	12,000	"	20
Western Maryland Ry.				
Port Covington	Bituminous	20,000	"	10
Total, Baltimore		85,500	"	..
Norfolk and Newport News.				
Chesapeake & Ohio Ry.				
Newport News	Bituminous	30,000	tons	16
N. & W. Ry.				
Lamberts Point	Bituminous	40,000	"	16

	Kind of Coal	Daily Capacity		Hours
Virginian Ry.				
Sewalls Point	Bituminous	25,000	tons	16
Total, Hampton Roads		**95,000**	"	..
Charleston.				
Southern Ry.	**Bituminous**	**15,000**	"	**24**
Total, Charleston		**15,000**	"	..
Grand Total		**386,500**	"	..

Western Maryland Ry. Shipments.

Shipments of bituminous coal (net tons) over the Western Maryland Ry., for revenue and company use, during 1923 and 1924, were:

Month	Revenue		Company		Total	
	1923	1924	1923	1924	1923	1924
January	885,384	679,899	62,272	59,012	947,656	738,911
February	771,194	640,324	57,116	57,910	828,310	698,234
March	916,892	630,148	65,023	56,613	981,915	686,761
April	890,736	493,277	66,084	48,080	956,820	541,357
May	918,109	562,224	63,135	46,343	981,244	608,567
June	900,090	565,228	58,332	43,416	958,422	608,644
July	915,793	532,076	55,644	43,431	971,437	575,507
August	950,546	636,358	53,084	42,018	1,003,630	678,376
September	806,946	746,636	67,941	50,116	874,887	796,752
October	599,443	833,763	56,064	59,714	655,507	893,477
November	583,718	799,060	66,739	45,875	650,457	844,935
December	664,297	780,859	56,029	63,836	720,326	844,695
Total	9,803,148	7,899,852	727,463	616,364	10,530,611	8,516,216

Total tonnage of bituminous coal originated on Western Maryland Ry. and G. C. & C. RR. for calendar years 1923 and 1924 (gross tons):

Month	Elkins Div.		G., C. & C		Total	
	1923	1924	1923	1924	1923	1924
January	370,116	259,640	12,363	15,650	382,479	275,290
February	331,460	245,244	13,413	15,728	344,873	260,972
March	406,317	243,974	17,263	15,080	423,580	259,054
April	388,458	177,568	18,383	13,142	406,841	190,710
May	392,669	175,905	16,025	17,422	408,694	193,327
June	380,294	205,658	10,114	14,878	390,408	220,536
July	322,453	189,839	7,702	16,295	330,155	206,134
August	332,482	183,670	10,938	14,988	343,420	198,658
September	297,249	210,298	10,506	21,090	307,755	231,388
October	218,270	229,689	11,456	26,641	229,726	256,330
November	224,688	224,665	10,287	19,802	234,975	244,467
December	265,915	219,801	11,987	28,341	277,902	248,142
Total	3,930,371	2,565,951	150,437	219,057	4,080,808	2,785,008

Rates on Lake Cargo Coal. F. O. B. Cars on Docks at Various Ports. Also Handling Charge.

We show below in cents per ton the rates charged on lake cargo coal from various districts shipping to the Lake Erie loading ports:

Year	No. 8 Hocking Cambridge	Middle	Youghiogheny Pittsburgh Moundsville	Connellsville Klondike	Fairmount	Cumberland Piedmont Gauley	Meyersdale	Kanawha Thacker Logan Pocahontas	New River Pocahontas
1910	85	70	88	96¾	96¾	115	115	97	112
1911	85	70	88	96¾	96¾	115	115	97	112
1912	75	60	78	90	90	112	112	97	112
1913	75	60	78	90	90	112	112	97	112
1914	75	60	78	90	90	112	112	97	112
1915	75	60	78	90	90	112	112	97	112
1916	75	60	78	90	90	112	112	97	112
(4/16) 1917	90	75	93	105	105	127	127	112	127
(7/13) 1917	90	75	93	99	108	120	115	118	133
(6/25) 1918	127	112	130	136	145	157	152	155	170
(8/26) 1920	183	168	186	192	201	213	208	211	226
*(5/4) 1921	155	140	158	164	173	185	180	183	198
**(11/1) 1921 ..	183	168	186	192	201	213	208	211	226
(7/1) 1922	163	148	166	172	181	193	188	191	206
1923	163	148	166	172	181	193	188	191	206
1924	163	148	166	172	181	193	188	191	206

Handling charge—5 cents net ton increased to 6 cents net ton in September and October, 1917. Figures given are rates per net ton.

Handling charge, effective August 26, 1920 (and for 1921 Season)—Cargo, .08½; Fuel, .11.

Handling charge, effective July 1, 1922—Cargo, .08; Fuel, 10c net ton.

* Rates in effect 5/4/21 will apply only on coal discharged from vessels at West Bank Lake Michigan ports north of the Illinois-Wisconsin State line, to and including Manistique, Michigan, or Lake Superior ports west of Whitefish Point, Michigan, including Port Arthur and Fort William, Ontario, Canada.

August 1, 1921, the above was superseded by the following:

Rates will apply only on coal discharged from vessels at ports on the Great Lakes, and tributary waters in the United States or Canada, on north and west of the Detroit River. (Expired Midnight October 31, 1921.)

** The 28c reduction was suspended on October 31, 1921, by all roads except the B. & L. E. and the W. & L. E. These roads continued the low rate until the close of the lake season. The B. & O. re-established the low rate on Crescent coal November 11, 1921, and on Ohio coal November 26, and continued the reduction until November 30, 1921.

The Interstate Commerce Commission allowed a reduction of 28 cents per ton during the summer months of 1921 to stimulate lake trade.

Coal Freight Rates.

We quote below, as a matter of record, the freight rates from certain southwestern Pennsylvania districts which took effect July 1, 1922, as reported by the Connellsville *Courier*.

TO EASTERN POINTS Rate per Gross Ton of 2,240 lbs.	Pittsb'g (9)	Connellsvil'e, Westmoreland, Fairmont (8)	G'burg (7)	Latrobe (6)
Baltimore, Md. (Track Deliv.)	$3.24	$3.09	$2.94	$2.84
Chester, Pa. (P. R. R.)	3.24	3.09	2.94	2.84
Chester, Pa. (P. & R.)	3.24	3.09	2.94	2.84
Harrisburg, Pa. (P. R. R.-P. & R.)	2.73	2.58	2.43	2.33
Johnstown, Pa. (B. & O.)	1.39	1.39	...	...
*Johnstown, Pa. (P. R. R.)	1.64	1.64	...	...
Lebanon, Pa. P. R. R. and P. & R.	3.11	2.96	2.81	2.71
New York, N. Y. (37th St.)	3.49	3.34	3.19	3.09
New York, N. Y. (Bklyn.)	3.62	3.47	3.32	3.22
Philadelphia	3.24	3.09	2.94	2.84
Sparrows Point	3.24	3.09	2.94	2.84
Steelton, Pa.	2.73	2.58	2.43	2.33
South Bethlehem, Pa.	3.36	3.21	3.06	2.96
Syracuse, N. Y.	3.36	3.21	3.06	2.96
To ATLANTIC PORTS via P. R. R.				
Greenwich, local	3.24	3.09	2.94	2.84
Greenwich, export	2.72	2.47	2.42	2.32
South Amboy, F. O. B. vessels	3.14	2.99	2.84	2.74
Harsimus Cove	3.19	3.04	2.89	2.79
Greenville	3.19	3.04	2.89	2.79
Canton, Baltimore, local	3.24	3.09	2.94	2.84
Canton, Baltimore, export	2.65	2.50	2.35	2.25
To ATLANTIC PORTS via B. & O.				
St. George Coal Piers	2.99	3.34	...	...
St. George for Export	3.14	2.99	...	...
Philadelphia, Local	3.24	3.09	...	...
Philadelphia for Export	2.72	2.47	...	...
Curtis Bay, Local	3.24	3.09	...	...
Curtis Bay for Export	2.65	2.50	...	...

*The rate from points on the Monongahela Railway in the Fairmont group south of the Pennsylvania State line to Johnstown is $1.76 per net ton. Rates to Johnstown from Greensburg and Latrobe groups apply specifically from point of origin to destination.

The Connellsville rate applies to shipments from points on the Southwest Branch of the Pennsylvania railroad south of Ruffsdale; from points on the Pittsburg, Virginia & Charleston and points on the Monongahela River railroad.

The Fairmont rate on shipments via the Baltimore & Ohio applies to shipments from points east of Suterville, Pa.; from points on the Smithfield & Masontown Branch and from the Fairmont Region of West Virginia.

TO WESTERN POINTS.	Pittsburgh Group	Originating District—Upper C'ville	Lower C'ville
Per Net Ton of 2,000 Lbs.	(1)	(2)	(3)
Canton, O.	$1.59	$1.65	$1.84
Chicago, Ill.	3.09	3.09	3.09
Cleveland, O.	1.84	1.90	1.99
Columbus, O.	1.89	2.02	2.14
Detroit, Mich.	2.58	2.58	2.58
Indiana Harbor, Ind.	3.09	3.09	3.09
Toledo, O.	2.39	2.39	2.39
Youngstown, O.	1.34	1.42	1.58
Lake Ports	1.66	1.72	1.81
To CANADIAN BASING POINTS.			
Buffalo, N. Y.	2.24	2.39	2.39
Port Maitland, Ont.	2.24	2.39	2,39

These rates apply in a general way to shipments from the territory described. There are, however, numerous extensions to the specific rates quoted and in each case before applying the rate as a basis for freight charges the shipper or consignee shou'd determine the exact location of the mine from which the business will move, then refer to the Tariff naming the rate in question.

The Pittsburgh District includes points east as far as Latrobe and south on the Southwest Branch to and including Ruffsdale; south to, but not including Brownsville on the Pittsburg, Virginia & Charleston railroad, eastward to Dawson on the Baltimore & Ohio railroad, and eastward to Dickerson Run and southwest to and including Brownsville on the New York Central lines.

The Connellsville District includes points on the Southwest Branch of the Pennsylvania railroad south of Ruffsdale; on the Pittsburg, Virginia & Charleston except Braznell and all Monongahela River railroad points; New York Central points east of Dickerson Run, including Connellsville Transfer, and points on the Baltimore & Ohio, Dawson to Point Marion, Pa.

The figures (9), (8), (7), etc., at the head of columns of coal freight rates in our table are the Rate Group Numbers—a form of designation employed by the railroads under Interstate Commerce Commission rulings and orders.

Anthracite Freight to Tide.

Size	New York (Lower ports)	Philadelphia	Size	New York (Lower ports)	Philadelphia
Broken	$2.34	$2.39	Pea	$2.22	$2.14
Egg	2.34	2.39	Buckwheat	2.22	2.14
Stove	2.34	2.39	Rice	2.22	2.14
Chestnut	2.34	2.39	Barley	2.22	2.14
Range	2.34	2.39	Birdseye	2.22	2.14

Cement mills are among the largest consumers of gas coal when business is good, and last year they produced 148,000,000 barrels, the largest output on record. Every year since 1920 has shown an increase, and the cement production has grown 50 per cent in five years.

Buffalo, Rochester & Pittsburgh Ry. Shipments.

Shipments of bituminous coal and coke over the Buffalo, Rochester & Pittsburgh Ry. during 12 months, separately and collectively, 1924 and six previous years, were:

Month	1918	1919	1920	1921	1922	1923	1924
Jan. ...	824,319	839,886	751,666	444,559	421,775	1,128,815	601,105
Feb. ..	865,782	523,973	584,715	357,559	500,715	969,372	617,481
Mar. ..	1,133,596	572,637	854,948	379,387	649,445	997,584	572,008
Apr. ..	1,025,153	354,716	843,338	251,589	185,929	627,210	285,170
May ..	1,005,916	418,432	818,422	325,996	200,396	752,911	372,621
June ..	1,060,890	436,650	836,775	334,738	201,742	727,875	367,321
July ..	1,061,389	600,996	988,540	314,567	151,804	702,577	331,228
Aug. ..	1,080,438	739,066	922,462	374,921	199,428	749,721	373,159
Sept. ..	973,363	810,782	898,449	358,901	531,506	678,352	436,004
Oct. ...	906,581	932,285	977,441	439,784	998,215	547,629	509,781
Nov. ..	754,639	220,929	855,562	374,098	1,112,741	525,176	430,173
Dec. ..	957,532	435,326	921,773	392,022	1,085,536	579,764	457,304
Total.	11,658,598	6,875,678	10,254,960	4,349,308	6,239,232	8,986,986	5,353,355

The above figures include company tonnage, also coal received from connecting lines. All net tons.

Coke shipments in 1922, 1923 and 1924 were:

Month	1922	1923	1924	Month	1922	1923	1924
January	26,455	25,873	33,171	July	7,285	36,301	14,459
February ...	21,915	36,984	41,584	August	5,541	29,155	14,683
March	23,906	34,996	39,209	September ...	6,415	26,894	27,477
April	22,767	32,108	33,743	October	12,218	27,544	6,073
May	12,162	33,606	19,034	November ...	14,405	22,327	6,500
June	9,044	36,211	10,369	December ...	14,908	29,861	7,554
				Total	177,021	371,860	253,856

Huntingdon & Broad Top Shipments.

Shipments of bituminous coal over the Huntingdon & Broad Top Mountain RR., for revenue and company use (net tons) during 1923 and 1924 were:

	Revenue		Company		Total	
Month	1923	1924	1923	1924	1923	1924
January	110,338	72,973	2,828	2,110	113,166	75,083
February	79,210	72,009	2,134	2,472	81,344	74,481
March	97,608	69,035	2,919	3,601	100,527	72,636
April	75,096	26,121	2,169	249	77,265	26,371
May	86,444	20,549	2,100	460	88,544	21,009
June	84,125	21,585	2,025	1,118	86,150	22,704
July	81,851	24,129	2,733	1,570	84,584	25,699
August	99,947	35,856	4,432	1,055	104,379	36,911
September	87,259	67,238	1,907	1,724	89,166	68,962
October	74,817	71,178	1,656	2,198	76,473	73,377
November	53,273	70,295	1,227	1,883	54,500	72,179
December	62,390	81,965	1,878	2,356	64,268	84,322
Total	992,358	632,939	28,008	20,801	1,020,366	653,740

Eastern Freight Rates.

	Rates Per Gross Ton					
	Clearfield, Cumberland, Meyersdale		West Virginia, Westmoreland		Pittsburgh, Finleyville, Gauley	
	Old	New	Old	New	Old	New
NEW YORK HARBOR						
Track (Jersey City)	3.46	3.09	3.71	3.34	3.86	3.49
Tide (Upper ports)	3.16	2.79	3.41	3.04	3.56	3 19
Tide (Lower ports)....	3.11	2.74	3.36	2.99	3.51	3.14
PHILADELPHIA						
Track	3.18	2.84	3.43	3.09	3.58	3.24
Tide (Inside capes)	2.93	2.59	3.18	2.84	3.33	2.99
Tide (Outside capes) ...	2.60	2.32	2.85	2.57	3.00	2.72
BALTIMORE						
Track	3.18	2.84	3.43	3.09	3.58	3.24
Tide (Inside capes)	2.93	2.59	3.18	2.84	3.32	2.99
Tide (Outside capes) ...	2.53	2.25	2.78	2.50	2.93	2.65
	Pocahontas, New River		Kanawha, Thacker		Kenova	
	Old	New	Old	New	Old	New
HAMPTON ROADS						
Tide (Inside capes)	3.04	2.74	3.14	...	3.24	...
Tide (Outside capes) ...	2.80	2.52	2.90	2.62	3.00	2.72

Reading Company's Bituminous Tonnage.

Shipments of bituminous coal (revenue) by the Reading Company during 1924 and five previous years, in gross tons, were:

Month	1919	1920	1921	1922	1923	1924
January	1,485,159	2,109,271	1,804,413	1,120,527	2,190,194	1,600,378
February	1,202,085	1,430,303	1,238,237	1,547,334	1,741,848	1,699,133
March	1,141,463	1,407,882	1,310,357	1,742,560	1,827,647	1,659,743
April	1,345,075	1,590,552	1,132,870	989,039	1,817,795	1,177,167
May	1,592,268	1,798,507	1,206,890	755,558	1,766,100	1,285,587
June	1,538,397	1,542,451	1,217,580	831,530	1,711,542	1,196,126
July	2,118,877	1,820,642	1,122,832	581,203	1,642,576	1,168,708
August	2,352,234	1,956,565	1,290,104	842,369	1,910,296	1,182,624
September	2,561,379	2,092,759	1,266,364	1,333,362	1,692,768	1,404,233
October	2,982,529	2,159,019	1,481,533	1,528,694	1,587,435	1,617,084
November	1,112,823	2,070,579	1,334,318	1,551,411	1,438,673	1,516,016
December	1,389,151	2,180,860	1,160,353	1,712,081	1,556,991	1,717,391
Total 20,821,940		22,359,390	15,526,436	14,535,668	20,883,865	17,224,190

None of this tonnage originates on the Reading, being turned over to the road by the New York Central, B. & O. and Western Maryland for the most part at such points as Newberry Junction, near Williamsport, Philadelphia and Shippensburg, the latter junction having developed notably in recent years with the upbuilding of the Western Maryland line.

Norfolk & Western Ry. Shipments.

Shipments of bituminous coal in net tons over the Norfolk & Western Ry., for revenue and company use, net tons, during 1923 and 1924, were:

Month	Revenue		Company		Total	
	1923	1924	1923	1924	1923	1924
January	2,221,009	2,711,726	264,814	239,613	2,485,823	2,951,339
February	2,846,328	2,829,076	250,604	249,436	2,096,932	3,078,512
March	2,379,271	2,481,769	295,619	279,246	2,674,890	2,761,015
April	2,226,946	2,010,852	248,499	225,394	2,475,445	2,236,246
May	2,679,794	2,141,326	236,571	180,568	2,916,365	2,321,894
June	2,634,080	2,103,787	202,167	222,034	2,836,247	2,325,821
July	2,672,068	2,387,642	204,359	192,444	2,876,427	2,580,086
August	2,906,959	2,728,437	227,631	209,817	3,134,590	2,938,254
September	2,559,450	2,909,287	227,739	234,587	2,787,189	3,143,874
October	2,705,966	3,208,952	246,408	263,234	2,952,374	3,472,186
November	2,298,522	2,759,363	252,324	267,423	2,550,846	3,026,786
December	2,201,475	2,781,781	236,730	229,657	2,438,205	3,011,438
Total	29,331,868	31,053,998	2,893,465	2,793,453	32,225,333	33,847,451

Baltimore & Ohio RR. Shipments.

Shipments of bituminous coal over the Baltimore & Ohio RR., for revenue and company use, during 1923 and 1924, were:

Month	Revenue		Company		Total	
	1923	1924	1923	1924	1923	1924
January	4,462,725	4,086,864	678,434	575,432	5,141,157	4,662,296
February	3,694,719	3,964,260	644,174	507,002	4,338,893	4,471,262
March	4,050,123	3,856,098	691,580	545,503	4,741,703	4,401,601
April	3,720,020	2,690,651	741,350	505,932	4,461,370	3,196,583
May	4,548,500	3,015,767	713,367	494,654	5,261,867	3,510,421
June	4,735,104	2,838,979	656,146	459,580	4,391,250	3,298,559
July	4,511,517	3,056,416	803,326	297,853	5,314,843	3,354,269
August	4,581,441	3,285,938	785,154	413,875	5,366,595	3,699,813
September	4,204,117	3,809,756	725,766	442,317	4,929,883	4,252,073
October	4,239,521	4,301,171	676,725	475,688	4,916,246	4,776,859
November	4,082,419	4,043,627	670,931	431,330	4,753,350	4,474,957
December	3,186,806	3,879,166	619,457	470,459	3,796,263	4,349,625
Total	50,017,012	42,828,693	8,406,410	5,619,625	58,423,422	48,448,318

Erie RR. Bituminous Shipments.

Shipments of bituminous coal over the Erie RR., revenue and company, during the past five years were:

	Revenue	Company		Revenue	Company
1920	12,036,731	4,007,295	1923	11,554,424	4,102,480
1921	6,959,744	3,620,691	1924	8,343,217	3,134,692
1922	7,797,689	2,646,874			

PENNSYLVANIA'S COAL

Avoidable Waste in Mining Is Being Reduced by Improved Methods.

More than 1,000,000,000 tons of soft coal, of which approximately 62,000,000 tons were unavoidably lost, have been lost in mining in Pennsylvania in the last twenty years, James D. Sisler, Associate State Geologist, declares in a bulletin entitled "Bituminous Coal Losses and Mining Methods in Pennsylvania," issued for distribution by the State Geological Survey. It was pointed out that Pennsylvania has the second highest coal recovery in the United States, with West Virginia first.

The bulletin traces the history of mining developments in Pennsylvania from Civil War times, being the only study of its kind made of the State's soft coal fields. It describes in detail mining methods employed in each district and is a co-operative work between the Pennsylvania Survey and the United States Coal Commission.

In discussing bituminous losses, Mr. Sisler says that "most people do not realize that the enormous waste in mining coal occurs before it is entirely prepared for use. In the early days, 40 per cent or less of coal was removed from the ground. Even within the last twenty years there has been a 50 per cent loss of soft coal in mining."

He declares that a detailed investigation disclosed that 28.6 per cent of total merchantable coal is lost beyond recovery, with 15.5 per cent of this waste avoidable. Of the approximately 44,000,000 tons of coal lost in Pennsylvania in one year, 21,000,000 are unavoidably lost.

Higher Percentages of Recovery.

Mr. Sisler states that the recovery of Pennsylvania soft coal is increasing each year as the "great value of coal resources is better realized," asserting that the inauguration of new mining methods, more conservation of the coal resources, probably within a few years, will increase the recovery to 80 or 85 per cent. He believes that "in practically every district, low percentages of recovery are primarily results of economic conditions or an effort of the mine owner to keep his head above water against strong competitive operation. He is impelled to mine only the thickest and best coal in order to reduce his operation cost so he can meet competition."

Mr. Sisler says further: "There is no reconciliation between the losses in coal mining and the depletion of Pennsylvania's coal reserves against restraining economic conditions. Some of the finest coal in the State has been wasted, and even now mines are working thinner beds in which mining costs are higher. These costs can be reduced only by more efficient mining methods, electrification of mines and the installation of modern machinery."

In describing the State's minable beds of bituminous coal, Mr. Sisler declared the soft coal now is mined from twenty or more beds, with an aggregate thickness of about seventy-five feet. Regarding coal reserves, which are estimated by counties, he points out that the State originally had over 75,000,000,000 tons of minable coal, of which about 6,000,000,000 tons has been mined out. He estimates that the 44,000,000,000 tons of recoverable coal remaining as reserves will last at least 300 years.

WORLD'S PRODUCTION OF COAL IN 1924

From the complete information that is available it is estimated that the world's total production of all coal in 1924 was approximately 1,350,000,000 metric tons. In comparison with the output in 1923 this was a decrease of about 9,000,000 tons, and it was 16,000,000 tons less than the high record of 1913. The chief factor contributing to the decline was the decrease of more than 14 per cent in the output of soft coal in the United States, and to less important decreases in Canada, Great Britain, Poland, Hungary, Russia and Japan. All the other countries for which figures are shown in the table reported increased production. Following the settlement of the economic disorders that attended the occupation of the Ruhr, production increased rapidly and the total coal—118,829,000 tons—was within 10 per cent of the 1922 output. The production of lignite also increased and totaled 124,360,000 tons.

It is of interest to note the increase in the production in France. From a total of 41,000,000 tons in 1913, the interruption brought about by the World War carried the output to the low level of 22,000,000 tons in 1919. Production has recovered steadily since 1919, and the 1924 total of nearly 45,000,000 tons (including Lorraine) was more than double that in 1922 and exceeded the pre-war level by 4,000,000 tons.

The following table prepared by W. I. Whiteside, of the Section of Foreign Mineral Reserves, summarizes the information received by the Geological Survey up to March 14th. Revisions will be made as official figures are received and the table will be republished at a later date. Estimates have been used for less than 5 per cent of the world's output.

COAL PRODUCED IN PRINCIPAL COUNTRIES OF WORLD

(In metric tons of 2,204.622 lbs.)

Country	1922	1923	1924
North America—			
Canada: Coal	10,587,611	12,163,804	11,900,000
Lignite	3,162,907	3,249,605	
United States: Anthracite	49,607,344	84,675,282	82,000,000
Bituminous and Lignite	383,073,174	511,791,872	438,420,000
Other countries	(a)	(a)	(a)
South America	1,916,275	2,004,192	(a)
Europe—			
Belgium	21,208,500	22,922,340	23,360,000
Czechoslovakia: Coal	10,464,990	12,347,251	34,866,000
Lignite	19,174,296	16,265,530	
France: Coal	31,810,000	37,682,235	44,955,000
Lignite	772,000	861,435	
Germany: Coal[b]	129,964,597	62,224,535	118,829,000
Lignite	137,207,125	118,248,735	124,360,000
Saar	11,240,000	9,121,285	14,032,000
Hungary	7,717,610	7,709,775	7,200,000
Netherlands: Coal	4,866,371	5,595,478	5,882,000
Lignite	28,919	54,185	190,000
Poland	24,194,797	36,296,032	[c]32,000,000
Russia	9,049,300	14,504,300	[c]14,000,000

Country	1922	1923	1924
Spain: Coal	4,435,843	5,971,446)	(a)
Lignite	329,680	394,268)	
United Kingdom: Great Britain	253,613,054	280,430,369	273,453,000
Ireland	(a)	(a)	(a)
Asia—			
China	22,681,000	(a)	(a)
India, British	19,316,112	19,973,285	20,524,000
Japan (inc. Taiwan and Karafuto):			
Coal	29,163,727	30,600,000)	[c]30,000,000
Lignite	166,302	151,462)	
Other countries	(a)	(a)	(a)
Africa—			
Union of South Africa	8,830,774	10,810,897	11,331,000
Oceania—			
Australia:			
New South Wales	10,346,572	10,646,693	11,805,000
Other states	2,149,845	2,267,799	(a)
Other countries	(a)	(a)	(a)
Total	1,226,200,000	1,359,000,000	1,350,000,000

(a) Estimate included in total. ([b]) Of which the Ruhr produced as follows: 1922, 97,346,176 tons; 1923, 40,000,000 tons; 1924, 90,240,000 tons (see text). ([c]) Estimated from monthly figures as follows: Poland and Russia, 11 months; Japan, 9 months.

Output still below the figures of 1913 when tonnage record was established.

Rail Shipments of Ohio Coal.

The following tabulation shows the tonnage in recent years of several of the railroads in the Ohio Coal Traffic Association transporting coal from Ohio mines to various destinations:

Railroads	1921	1922	1923	1924
Hocking Valley	2,561,056	2,361,810	3,070,821	1,204,099
N. Y. Central (OCL)*	2,186,568	1,607,698	4,398,050	3,226,316
Baltimore & Ohio	2,968,702	2,154,152	3,239,597	2,379,290
Wheeling & Lake Erie	3,835,739	2,837,447	5,267,987	3,995,337
Cleveland, Lorain & Wheeling	3,977,765	2,610,532	4,612,703	4,496,818
Zanesville & Western	1,002,284	928,572	†	†
Pennsylvania Lines	6,018,427	3,990,738	5,378,306	4,715,588
N. Y. Central (West)	1,187,492	1,343,908	2,067,323	1,103,392
Kanawha & Michigan	501,589	441,117	†	†
Detroit, Toledo & Ironton	78,371	347,307	153,527	44,802
Pitts. & West Virginia Ry.	163,254	865,902	744,159	470,437
Baltimore & Ohio (OD) RR.	181,079	301,663	325,057	181,088
Baltimore & Ohio (TD) RR.	5,487	54,510	28,300	2,152
Federal Valley RR.	143,991	93,917	88,201	53,822
Norfolk & Western Ry.	4,553	38,828	12,926	943
Total, net tons	24,816,357	19,978,401	29,386,957	21,874,084

*Formerly T. & O. C. Ry. †Included in New York Central (OCL).

Coal Traffic at St. Louis, Mo.

The coal supply of St. Louis is derived almost entirely from mines within a short distance of that city, and is received via the railroads which traverse the southern part of Illinois. Although Missouri is a State of important coal production, none of its tonnage is shipped to the largest city in that State. In fact, St. Louis occupies a unique position of isolation so far as the meeting of its coal requirements is concerned, and probably no other large city obtains its coal at such small expense for freight.

Receipts of coal by the several lines of railroads, etc., are thus given by the secretary of the Merchants' Exchange:

Route	1920	1921	1922	1923	1924
Missouri Pacific RR.....	234,395	125,789	121,856	188,277	266,378
Balt. & Ohio S. W. RR.....	782,336	543,254	514,436	1,059,907	908,172
C., C., C. & St. Louis Ry....	143,277	187,279	146,324	161,119	326,428
P., C., C. & St. L. RR.....	631,097	656,648	556,140	582,870	611,825
Illinois Central RR.....	959,526	1,940,530	2,194,932	2,886,610	2,280,164
Wabash Ry.	257,664	172,945	199,710	155,625	191,477
Louisville & Nashville RR...	1,013,862	894,147	1,085,699	746,279	693,031
Southern Ry.	508,357	360,522	362,068	425,257	342,589
Mobile & Ohio RR.....	808,000	442,850	302,750	319,900	250,250
Tol., St. L. & Western RR..	35,160	8,356	27,810	58,019	32,122
St. Louis & O'Fallon RR....	1,131,488	791,494	758,048	717,076	546,549
St.L.,I.M. & S.Ry. (Ill. Div).	720,227	503,554	508,192	1,593,400	2,738,746
St. L., Troy & Eastern Ry..	998,032	648,869	503,463	401,679	493,568
St. L. & Belleville Elec. Ry..	493,087	326,939	385,012	426,273	180,343
Chicago & Eastern Ill., RR..	20,425	23,245	22,321	72,200	108,953
St. Louis-San Francisco Ry..	113,239	66,766	64,455	82,501	92,889
C., B. & Q. RR. (East).....	318,525	1,228,650	1,009,350	1,494,740	1,468,202
C., B. & Q. RR. (West).....	66,840	235,760	194,800	299,750	289,350
C., P. & St. Louis RR.....	600	.....	.....	.....	.....
Litchfield & Madison Ry.....	958,726	453,730	550,440	683,860	628,445
East St. L. & Sub. RR.....	896,836	421,782	401,738	341,878	130,053
Illinois Traction System.....	401,240	299,600	299,450	396,800	373,632
C. & A. (Ill. Div.).....	.....	.....	11,135	18,181	.....
C. & A. (Mo. Div.).....	.....	.....	882	62	15,942
Total tons.....	11,492,939	10,332,739	10,221,911	13,112,263	12,969,108

Receipts of Anthracite Included in Above.

Receipts of anthracite coal during past 15 years were:

Year	Tons	Year	Tons	Year	Tons
1909.....	236,040	1915.....	189,478	1921.....	111,038
1910.....	289,463	1916.....	172,832	1922.....	60,813
1911.....	487,030	1917.....	163,789	1923.....	70,817
1912.....	277,683	1918.....	64,515	1924.....	35,814
1913.....	274,423	1919.....	114,918	of which 5,713 tons were through.	
1914.....	174,694	1920.....	155,991		

Receipts of Coke at St. Louis.

Year	Tons	Year	Tons	Year	Tons
1910	191,190	1915	121,389	1920	128,701
1911	192,245	1916	215,025	1921	167,950
1912	190,370	1917	217,236	1922	293,175
1913	190,857	1918	168,205	1923	322,220
1914	137,296	1919	97,809	1924	205,045

France—Imports and Exports, 1924.

Coal and coke imports in the year 1924 in metric tons, were:

Imports.	1924.
Coal	
Sarre	5,214,030
Great Britain	13,019,711
Belgium and Luxemburg	1,710,694
United States	344,648
Germany	4,265,179
Spain	12,301
Holland	509,028
Other countries	30,993
Total (coal)	23,106,584
Coke	
Great Britain	53,493
Sarre	64,362
Belgium and Luxemburg	389,781
Holland	322,229
Germany	4,540,193
United States	36,695
Other countries	442
Total (coke)	5,407,195
Patent fuel	
Great Britain	110,957
Belgium and Luxemburg	400,894
Germany	461,531
Other countries	8,045
Total (patent fuel)	981,427

Exports.	1924.
Belgium and Luxemburg	1,066,053
Switzerland	512,654
Spain	1,933
Italy	26,961
Germany	143,780
Sarre	152,532
Other countries	14,718
Bunkers—French steamers	289,238
Bunkers—Foreign steamers	37,229
Total (coal)	2,245,098
Switzerland	96,963
Spain	3,390
Italy	242,912
Germany	999
Belgium and Luxemburg	97,630
Sarre	34,099
Other countries	31,381
Total (coke)	507,974
Switzerland	129,495
Algeria	4,837
Sarre	4,638
Italy	2,118
Germany	9,149
Other countries	4,948
Bunkers—French steamers	7,817
Bunkers—Foreign steamers	1,025
Total (patent fuel)	164,027

An Early Anti-Smoke Decision.

The first legal pronouncement against smoke as a public nuisance was made by Chancellor Sir Edward Coke, Chief Justice of the King's Bench of England, during the early part of the 17th Century. His decision in the Aldred case in 1646, the year of Shakespeare's death, made smoke a nuisance against which a court might issue an injunction and the aggrieved person might recover damages.

In spite of the coincidence in names, the word coke was originally derived from an old English term, "coaks," meaning cinders.

Chesapeake & Ohio Ry. Shipments.

Shipments of bituminous coal over Chesapeake and Ohio Ry. for revenue and company use, during 1923 and 1924, were:

Month	Revenue		Company		Total	
	1923	1924	1923	1924	1923	1924
January	2,639,971	2,878,332	226,896	182,378	2,866,867	3,060,710
February	2,269,737	3,195,827	199,409	203,928	2,469,146	3,399,755
March	2,399,044	2,989,506	239,994	159,752	2,639,038	3,149,258
April	2,528,712	2,720,924	182,890	155,377	2,711,602	2,876,301
May	2,992,967	3,175,874	202,808	141,349	3,195,775	3,317,223
June	2,959,869	3,366,404	181,614	121,287	3,141,483	3,487,691
July	3,318,143	3,311,963	134,142	140,093	3,452,285	3,452,056
August	3,398,957	3,876,468	166,698	124,401	3,565,655	4,000,869
September	3,435,452	3,841,423	138,733	146,316	3,574,185	3,987,739
October	3,488,692	4,366,721	131,229	139,284	3,619,921	4,506,005
November	2,892,865	3,943,674	153,577	145,830	3,046,442	4,089,504
December	2,531,652	3,777,037	135,709	185,306	2,667,361	3,962,343
Total	34,856,061	41,444,153	2,093,699	1,845,301	36,949,760	43,289,454

Buffalo & Susquehanna RR. Shipments.

Comparative statement of bituminous coal tonnage originating on this line during the calendar years 1923 and 1924 were:

Month	Revenue		Company		Total	
	1923	1924	1923	1924	1923	1924
January	161,185	134,640	11,105	8,915	172,290	143,555
February	145,016	120,211	9,356	7,211	154,372	127,422
March	164,995	79,903	10,979	6,109	175,974	86,012
April	87,959	62,817	7,594	4,821	95,553	67,638
May	108,588	54,290	5,567	4,118	114,155	58,408
June	119,754	54,276	6,530	3,566	126,284	57,842
July	114,469	62,355	6,499	3,012	120,968	65,367
August	134,576	74,573	8,200	4,145	142,776	78,718
September	119,484	84,842	7,394	4,372	126,878	89,214
October	118,994	93,564	7,203	5,786	126,197	99,350
November	124,998	90,630	8,324	5,872	133,322	96,502
December	132,244	112,707	8,218	6,934	140,462	119,641
Total	1,532,262	1,024,808	96,969	64,861	1,629,231	1,089,669

Coal Statistics for Canada.

	1923	1924
Output	16,893,551	13,617,313
Imports	22,687,320	16,828,578
Exports	1,654,406	773,246
Coal made available	37,926,465	29,672,645

Coal and Coke Exports from Buffalo.

Exports of coal and coke from the Buffalo customs district, by months, during calendar years 1923 and 1924 were:

Month	Anthracite		Bituminous		Coke	
	1923	1924	1923	1924	1923	1924
January	226,379	180,883	404,895	339,537	40,833	17,977
February	219,233	212,523	342,881	452,385	39,495	20,137
March	230,155	207,958	388,671	387,463	33,147	82,924
April	239,721	147,579	317,291	137,632	36,816	10,142
May	209,911	140,555	277,124	152,496	38,494	8,220
June	193,558	150,198	262,973	129,890	28,199	5,171
July	207,800	141,824	253,655	164,386	23,449	7,784
August	202,047	120,837	247,080	149,533	34,110	9,181
September	61,756	175,119	283,950	167,169	28,300	12,584
October	195,067	156,667	236,702	184,095	26,946	21,001
November	155,830	152,456	165,252	160,862	12,150	27,822
December	197,572	195,821	272,945	242,728	15,737	23,452
Total	2,339,029	1,982,420	3,453,419	2,668,176	359,676	246,395

Exports from Rochester District.

Exports of coal and coke from the Rochester customs district (Oswego and Rochester), by months, during calendar years 1923 and 1924 were:

Month	Anthracite		Bituminous		Coke	
	1923	1924	1923	1924	1923	1924
January	3,075	4,770	43,691	33,354	....	17
February	2,767	4,286	41,102	55,006	1,000	58
March	3,091	3,344	46,445	40,097	67	79
April	5,081	3,605	32,262	15,143	103	...
May	65,898	27,276	64,106	37,675	180	37
June	76,765	52,676	72,882	125,907	22	...
July	73,722	34,164	83,489	57,124	13	...
August	79,888	22,622	71,473	40,589	83	...
September	17,405	23,825	65,984	58,201	20	...
October	67,480	46,715	53,589	54,905	17	...
November	56,306	27,900	44,107	35,948	57	...
December	6,052	5,611	36,236	15,044	18	...
Total	457,530	256,794	655,366	568,993	1,580	191

Briquets in 1924.

Below are figures showing the production of fuel briquets in the United States during the past eight years, as reported by the Geological Survey in net tons.

	Net Tons		Net Tons		Net Tons
1919	295,734	1921	398,949	1923	696,810
1920	567,192	1922	619,425	1924	580,470

Commenting on the decline of 116,340 tons in the 1924 production, the Survey says that a loss of 131,144 tons, or more than 50 per cent, in the Eastern States, was the chief factor. Production also decreased slightly in the Pacific Coast States. In the Central States there was an increase of about seven per cent, to 308,370 tons, a new high record for that territory.

Coal Imports by South America.

We give below data from official sources relative to shipments of coal from the United States and from Great Britain to the principal countries of South America during a term of years. It is interesting to note how the tonnage from this country grew following the outbreak of the war:

From United States.

To	1918	1919	1920	1921	1922	1923	1924
Argentina	178,899	483,389	1,746,007	746,439	78,971	130,765	196,480
Bolivia	.....	.....	.....	.....	.....	521	.....
Brazil	559,089	642,109	966,029	527,225	152,976	303,412	759,138
Chile	336,069	123,860	494,121	150,844	46,916	19,629	55,304
Peru	24,249	45,819	35,382	28,152	13,828	10,020	19,116
Paraguay	.....	.....	6,945	.....	.....	.....	.....
Uruguay	256,434	194,197	267,807	88,390	.....	29,295	61,431
Venezuela	2,417	496	2,825	6,649	23	23	2,320
Total	1,357,157	1,489,870	3,519,116	1,547,699	292,314	493,665	1,093,789

From Great Britain.

To	1918	1919	1920	1921	1922	1923	1924
Argentina	258,110	639,089	273,668	887,344	2,021,092	2,461,074	3,115,880
Brazil	169,982	189,205	158,144	242,223	1,013,221	1,151,629	798,298
Chile	9,000	7,294	7,122	22,624	84,311	19,091	67,431
Peru	.....	.....	.....	7,244	21,481	17,286	2,961
Uruguay	162,417	184,813	117,480	221,817	502,533	404,894	419,982
Venezuela	.....	.....	.....	.....	851	479	842
Total	599,509	1,020,401	556,414	1,381,249	3,643,489	4,054,453	4,405,394

Michigan Customs District Exports.

Exports of coal and coke from the Michigan Customs District (Detroit, Port Huron, Marquette, Grand Haven), by months, during the calendar years 1923 and 1924 were:

	Anthracite		Bituminous		Coke	
	1923	1924	1923	1924	1923	1924
January	125	1,089	233,072	91,793	10,057	12,380
February	150	1,161	177,790	185,686	9,456	17,116
March	502	1,533	182,144	173,554	15,416	19,141
April	...	575	189,640	72,815	18,473	16,473
May	341	455	138,960	71,692	13,903	13,380
June	18	467	126,090	73,116	13,677	10,279
July	88	888	113,009	71,479	13,166	8,297
August	199	752	103,003	75,607	13,086	10,374
September	891	731	139,275	67,544	28,535	12,067
October	434	302	113,394	96,187	15,564	16,011
November	1,238	679	83,977	92,942	10,941	13,410
December	3,061	...	119,569	82,776	10,915	12,371
Total	7,047	8,632	1,719,923	1,165,191	173,189	161,299

An Early South Dakota Coal Find.

Coal is a mineral which seldom attracts the interest of the writer of fiction as a subject upon which to weave an alluring account of mystery, inviolable pledge of secrecy and the other adjuncts of romance. Lost mines are usually confined to gold, silver or copper.

But possibly the higher value of coal has brought it into the realm of fiction in a story which has been sent forth under a date-line from Sisseton, S. D. A struggling young pioneer white man of the early days made the friendship of a Sioux half-breed and his full-blood Sioux wife. In time he gained their confidence and they revealed to him the existence of a deep spring of pure water and nearby "fire-rock," the same being a rich lignite deposit. But with the revelation came a request that it be kept secret, so that the Red Man need not be driven further away from his lands and forced into the western deserts to satisfy the greed of the white man for the natural wealth of the land.

The white man had taken samples of the lignite and had found them to be a good fuel, but when the Indian friend sought to pledge him to swear secrecy, "on the oath of a brother," until such time as the Indian released it, the pledge was given. Years passed and in 1910 the Indian died without releasing the pledge. The white man kept the faith, and assumed that it would never be revealed.

Recently the daughter of the aged Indian sought out the faithful white man, and with her mother, wife of the Indian friend, gave permission to seek out the long-concealed "black rock." As in all good stories, the place was obscure, but thanks to the map the ancient digging was found in time, over-grown with vines and covered with fallen rock. A few husky hours of digging and the "black fire rock" was uncovered and samples sent to Wahpeton, N. D., for testing.

The land whereon the coal was found is an Indian allotment and inquiries have been directed to the Indian Bureau as to what priority the finder's claims may be. Until this is settled, the location will be kept secret.

Adjoining the lignite are also deposits of gypsum, and nearby is potters' clay, so that if the story ends as all good stories should end, the faithful white man with his unswerving adherence to the solemnity of a pledge to his Indian brother, will undoubtedly become wealthy. But he has progressed rather well along in years to welcome the inevitable bride that goes with all well-conducted fiction stories.

Tonnage Produced at Strippings.

Figures recently made public show that approximately 11,940,000 tons of bituminous coal was produced at stripping operations in 1923. This was slightly over two per cent of the total output. There were 263 strippings, employing 9,332 men.

State tonnages of stripped coal were as follows, in round numbers: Ohio, 2,989,000 tons; Indiana, 2,290,000; Pennsylvania, 1,229,000; Missouri, 845,000; Kentucky, 845,000; Kansas, 651,000. Smaller amounts were produced at strippings in West Virginia, Alabama, Oklahoma, North Dakota and Georgia.

New York Central RR. Shipments.

Shipments of bituminous coal originating on the New York Central Lines East, for revenue and company use, during 1923 and 1924, were:

Month	Revenue		Company		Total	
	1923	1924	1923	1924	1923	1924
January	662,898	563,679	219,045	198,008	881,943	761,687
February	710,175	558,734	195,228	196,365	905,403	755,099
March	940,440	547,257	228,939	236,433	1,169,379	783,690
April	708,696	403,937	175,797	150,785	884,493	554,722
May	670,038	463,074	204,612	227,370	874,650	690,444
June	630,462	433,705	193,341	150,679	823,803	584,384
July	610,011	434,753	194,106	139,390	804,117	574,143
August	648,414	448,220	192,321	162,392	840,735	610,612
September	619,140	472,737	173,451	154,707	792,591	627,444
October	521,985	575,081	204,918	196,630	726,903	771,711
November	188,292	517,975	463,131	184,811	651,423	702,786
December	490,059	532,538	188,292	203,149	678,351	735,687
Total*	7,400,610	5,951,690	2,633,181	2,200,719	10,033,791	*8,152,409

The above also includes the coal originating on Cambria & Indiana RR. and the Pittsburgh & Susquehanna RR. and moved out over the New York Central RR. All remainder from Beech Creek.

*Included in total is tonnage originating in the Tioga District, 1924, 113,526 tons of which 107,219 net tons were revenue, and 6,307 net tons of supply coal.

Ohio Customs District Exports.

Exports of coal and coke from the Ohio customs district (Erie, Cleveland, Sandusky, Toledo), by months, during calendar years 1923 and 1924 were:

	Anthracite		Bituminous		Coke	
	1923	1924	1923	1924	1923	1924
January	....	....	116,002	74,819	378	1,373
February	....	....	866	....	92	....
March	....	....	1,832	40	...	....
April	1	....	134,179	193,243	961	153
May	10,605	4,480	788,235	567,237	5,011	9,252
June	3,964	4	1,028,192	643,257	237	21,942
July	3,101	12	974,871	810,951	9,751	18,697
August	10,709	5,397	1,013,151	685,545	13,614	9,884
September	151	254	769,530	779,866	9,345	6,587
October	....	4,943	616,094	785,305	14,094	3,964
November	6,937	4	551,989	353,092	3,862	587
December	6	2	246,327	255,269	1,243	3,817
Total	35,474	15,096	6,342,868	5,148,624	58,588	75,256

Indemnity Fuels.

The total deliveries of indemnity fuels for France alone from Germany during the year 1924 amounted to 4,291,300 tons of coal, 4,274,300 tons of coke, and 520,000 tons of lignite briquettes, a total of 9,085,000 tons.

Coal Exports to Brazil.

Exports of bituminous coal (gross tons) to Brazil, by months, during 1924 and five years previous, were:

Month	1919	1920	1921	1922	1923	1924
January	55,546	48,205	35,651	12,365	....	49,790
February	67,825	47,241	42,208	16,920	....	38,568
March	60,296	65,276	52,801	40,492	6,579	43,113
April	70,333	72,325	90,999	38,864	16,107	73,508
May	109,868	73,190	103,474	19,898	53,397	122,059
June	100,778	64,055	57,127	11,050	47,326	66,078
July	64,595	83,468	27,525	12,544	42,508	104,959
August	2,900	111,317	41,419	....	7,411	80,892
September	20,722	135,561	24,411	....	38,106	77,282
October	71,957	98,240	15,892	....	31,664	18,228
November	14,699	115,295	21,226	....	24,285	35,656
December	4,590	50,396	12,492	....	35,849	49,005
Total	634,109	966,029	527,225	152,133	310,724	759,138

The yearly consumption of coal in Brazil is approximately 1,250,000 tons, but would be much more if it were possible to obtain the full amount desired. It is used chiefly by steamships, railways, gas and electric light plants, and other industries in the following proportions:

Bunkering, 50 per cent; railways, 25 per cent; gas and electric light plants, 15 per cent; and other industries, 10 per cent.

Exports and Bunker Tonnage at New York.

The exports of coal and coke and foreign bunker tonnage supplied to vessels at the port of New York during 1923 and 1924 were:

	Anthracite		Bituminous		Coke		Foreign Bunker	
Month	1923	1924	1923	1924	1923	1924	1923	1924
January	8,408	12,287	26	258	1,536	2,535	123,439	100,315
February	2,561	1,917	880	5,247	1,226	1,185	145,949	113,078
March	4,399	1,834	24	3,910	1,046	1,900	143,976	95,095
April	5,913	5,129	211	615	726	7,297	117,094	111,927
May	6,724	8,064	1,201	1,872	1,135	2,313	150,118	98,547
June	9,380	5,147	2,657	1,172	1,811	2,133	172,302	115,333
July	11,196	16,109	4,092	1,239	168	1,049	153,418	91,855
August	12,442	10,536	93	6,479	1,922	3,370	191,270	96,870
September	6,663	9,688	3,887	888	869	49	180,644	87,657
October	6,373	12,603	37	4,730	886	1,734	149,929	105,474
November	9,559	10,235	126	3,157	1,381	692	125,736	75,528
December	2,711	5,096	1,654	374	300	1,077	93,169	82,951
Total	76,269	98,645	14,888	29,941	13,006	25,231	1,747,044	1,174,630

According to data recently compiled, coal mines annually furnish a market for about $70,000,000 worth of electrical equipment, 54,000 tons of steel rails, 100,000 mine cars, more than 200,000,000 pounds of explosives, over 8,000,000 gallons of paint, and over 20,000,000 gallons of lubricating oil.

Bituminous Coal Exports to Mexico.

Exports of bituminous coal (gross tons) to Mexico, by months, during 1924 and five years previous, were:

Month	1919	1920	1921	1922	1923	1924
January	9,845	6,197	32,176	7,177	6,534	5,825
February	5,142	11,263	25,807	5,254	4,301	5,213
March	5,429	15,696	12,687	7,889	5,568	7,643
April	6,200	17,047	8,289	16,271	11,440	9,089
May	6,810	7,121	7,915	10,918	11,310	8,503
June	14,312	7,003	17,830	5,937	11,560	7,212
July	5,824	16,683	14,499	6,415	11,190	4,299
August	10,953	17,773	13,604	6,052	6,357	2,140
September	10,892	15,847	13,688	4,756	4,876	5,803
October	8,757	20,557	10,377	7,048	5,136	6,830
November	8,932	21,543	8,702	4,683	6,125	4,505
December	8,489	46,261	6,637	8,710	10,251	7,027
Total	101,679	204,991	172,211	91,056	94,648	81,703

Coal Exports to Panama.

Exports of bituminous coal to Panama during 1924 and four years previous, were reported as follows in gross tons:

Month	1919	1920	1921	1922	1923	1924
January	6,135	34,067	51,452	9,625	9,440	.....
February	8,661	30,692	47,469	....	....	.....
March	5,290	18,306	19,657	....	....	.....
April	19,088	19,048	19,829	9,390	9,800	.....
May	....	....	....	6,477	....	32
June	....	10,167	8,522	19,101	....	19,312
July	....	9,899	18,149	7,025	....	12,049
August	....	....	9,611	9,595	....	12,078
September	2,745	....	9,606	19,163	....	23,700
October	5,396	10,741	19,229	9,485	....	24,082
November	8,482	3,644	9,627	9,622	....	12,016
December	16,300	18,478	9,678	4,975	25	19,276
Total	72,097	155,042	122,829	104,458	19,265	235,824

Explosives Used in Mines.

According to the U. S. Bureau of Mines, the bituminous mines of the country in 1924 used on an average 75 pounds of permissibles out of 352 pounds of all kinds of explosives per thousand tons of coal produced. In other words, of the total quantity of all kinds of explosives used in the production of bituminous coal, about 21 per cent were explosives of "permissible" types. In anthracite mining the consumption of all kinds of explosives averaged 729 pounds per thousand tons of coal mined, and of this quantity 188 pounds, or 26 per cent, were permissibles.

Exports and Bunker Tonnage at Philadelphia.

The exports of coal and coke and bunker tonnage supplied to vessels during 1923 and 1924 were:

Month	Anthracite 1923	Anthracite 1924	Bituminous 1923	Bituminous 1924	Coke 1923	Coke 1924	Foreign Bunker 1923	Foreign Bunker 1924
January	3,229	1,500	9,853	13,559	2,183	1,061	16,130	20,138
February	6,184	3,745	5,468	4,433	783	3,572	19,889	22,860
March	5,724	3,435	21,972	....	28,330	671	27,998	13,535
April	5,293	4,176	46,532	15,478	71,796	....	32,122	18,917
May	4,830	3,724	47,770	3,584	20,025	....	25,932	18,176
June	5,334	11,826	58,841	1,318	1,640	....	27,581	15,250
July	11,651	8,040	30,960	12,178	3,504	305	29,749	22,393
August	4,090	7,034	17,182	19,209	1,202	....	28,541	17,641
September	3,654	5,038	28,168	11,935	1,700	....	24,856	23,669
October	1,172	5,480	10,953	24,413	2,862	....	13,798	22,042
November	1,745	5,047	4,071	20,222	1,917	1,038	21,503	15,672
December	50	6,266	20,970	20,207	603	....	17,533	22,006
Total	52,956	65,311	303,146	147,036	136,545	6,647	285,632	232,299

Pittsburgh & Lake Erie RR. Shipments.

Shipments of bituminous coal over the Pittsburgh & Lake Erie RR. during 1924 and three years previous, and coke during 1923 and 1924 were:

	Bituminous Coal 1921	Bituminous Coal 1922	Bituminous Coal 1923	Bituminous Coal 1924	Coke 1923	Coke 1924
January	1,090,320	492,261	1,735,589	1,563,969	337,777	309,252
February	852,513	632,552	1,322,040	1,511,900	391,138	422,482
March	789,868	858,992	1,802,297	1,203,876	498,820	420,908
April	648,098	153,084	1,967,375	914,853	459,719	304,711
May	1,121,338	125,046	1,990,311	1,089,463	430,704	172,646
June	788,885	222,632	1,809,506	948,437	434,088	145,551
July	717,672	216,008	1,655,851	986,511	438,109	174,094
August	708,504	405,764	1,833,711	1,094,279	439,345	151,041
September	754,050	1,007,692	1,698,198	1,144,905	386,909	172,414
October	1,070,950	910,482	1,802,375	1,402,263	362,338	195,658
November	924,766	1,121,446	1,522,807	1,264,263	285,053	210,664
December	764,253	1,002,251	1,334,041	1,287,572	297,506	245,454
Total	10,231,217	7,148,140	20,483,381	14,412,291	4,761,506	2,924,875

Explosion Hazards of Pulverized Coal.

An investigation of the explosion hazards in industrial plants using pulverized coal as fuel, which has been conducted by the U. S. Bureau of Mines for the past several years, has been completed. Practically all the important plants using such fuel were visited, and the installations closely studied for safety conditions and the means employed for eliminating possible hazards.

The results of this research show that the causes of an explosion hazard are similar to those from coal dust in mines. Means of combatting them are to prevent clouds of coal dust from getting into the air, and to eliminate possible sources of ignition.

Analyses of Nova Scotia Coal.

During recent years of strikes and other periods of scarcity, Nova Scotia coal has been shipped to New England on a considerable scale and if such periods occur again, this source of supply will probably be drawn upon again. For that reason the following analyses of coal produced in Nova Scotia will doubtless be of interest as a matter of reference.

Seam and kind of Coal	Mine	Moist	Vol.	Fix. Car	Ash	Sul.	B.T.U.
Emery ⅝ lump	Sidney field	4.00	35.10	53.80	11.10	2.50	13,120
Gowrie ⅝ lump	Sidney field	2.80	34.70	53.00	12.30	6.40	12,620
Harbour ⅝ lump	Sidney field	2.40	38.60	55.50	5.90	3.70	14.000
Hub ⅝ lump	Sidney field	3.50	36.50	57.60	5.90	2.40	13,860
Lingan ¾ lump	Sidney field	4.90	37.30	57.90	4.80	1.80	13,790
Main	Sidney field	5.40	39.00	54.30	6.70	2.50	13,680
Phelan ⅝ lump	Sidney field	3.40	35.00	59.50	5.50	1.80	14.040
Carbon screened	No. 2	2.80	32.30	58.50	9.20	1.60	13,370
Screened coal	Chignecto	3.60	41.00	45.70	13.30	6.40	12,150
Screened coal	Joggins	1.30	36.60	44.80	18.60	5.40	11,590
Screened coal	Minudie	3.80	35.70	48.80	15.50	6.70	11,830
Richmond area	————	3.90	32.60	48.70	14.80	1.30	11,930
Carbon ⅝ lump	Inverness	9.30	40.00	49.60	10.40	6.00	12,150
Carbon ⅝ lump	Port Hood	4.70	27.10	48.30	14.60	7.90	11,770
Upper Bench	Inverness	3.50	37.50	45.60	13.40	5.70	11,540
Carbon r-o-m	Albion	3.60	31.40	58.10	10.50	0.90	13,180
Carbon ¾ lump	Acadia	1.80	26.00	64.80	9.20	0.90	13,860
Carbon ¾ lump	Allan	3.60	33.30	55.40	11.30	0.60	13,230
Carbon ¾ lump	Drummond	1.40	24.70	60.80	14.50	2.50	12,960
Carbon ¾ lump	Vale	2.10	32.10	50.60	17.30	1.00	12,020
Third	Albion	2.00	29.80	55.50	14.70	1.40	12,580
Springhill area	Edison	9.20	31.00	56.00	3.80	1.10	11,600

Coal Available for Consumption in Canada.

We give below figures relative to Canadian coal consumption based on official data compiled by Canadian government:

Month	1919	1920	1921	1922	1923	1924
January	2,249,747	2,162,684	2,885,978	1,942,932	3,256,573	2,686,847
February	2,120,283	2,028,386	2,323,612	2,190,966	2,781,457	2,444,709
March	1,916,081	2,490,002	2,168,003	2,887,499	3,001,491	3,091,392
April	1,593,431	2,045,562	1,707,091	1,306,924	2,344,440	1,738,425
May	2,041,873	2,007,941	2,300,548	1,122,510	2,845,506	1,783,530
June	2,209,379	2,690,650	2,827,744	1,263,067	3,778,731	2,118,182
July	2,654,082	3,481,007	2,786,562	1,139,593	3,365,106	2,323,443
August	2,839,860	3,580,236	3,244,557	1,007,903	4,234,121	2,202,208
September	3,253,358	3,409,635	2,722,557	2,306,843	3,272,493	2,448,483
October	3,346,778	3,600,143	2,736,524	4,081,989	3,309,568	3,070,639
November	2,557,817	4,043,562	2,898,097	4,466,889	3,045,076	2,957,616
December	2,049,130	3,664,329	2,572,564	3,879,158	2,691,903	2,807,171
Total net tons	28,831,819	35,204,137	31,173,837	27,596,273	37,926,465	29,672,645

Coal and Coke Shipped to Canada.

Exports of coal, anthracite and bituminous, and coke from the northern border of the United States to Canada, from customs districts, during 1923 and 1924 (gross tons), were:

	Anthracite		Bituminous		Coke	
	1923	1924	1923	1924	1923	1924
Buffalo	2,339,029	1,982,420	3,453,419	2,668,176	357,676	246,395
Dakota	36,044	24,113	78,557	90,089	22,644	37,753
Duluth-Superior	20,251	8,753	55,731	63,618	2,584	5,177
Michigan	7,047	8,632	1,719,923	1,155,191	173,189	161,299
Ohio	35,474	15,096	6,342,868	5,118,624	58,588	77,256
Rochester	457,530	256,794	655,366	568,993	1,580	191
St. Lawrence	1,420,640	1,117,559	2,483,862	1,366,528	31,308	7,137
Vermont	12,610	4,026	14,216	3,715	13,516	8,445
Maine & N. H.	364	118	10,293	4,336	4,137	2,876
Massachusetts	362	417	303	132	25	.....
Connecticut	43	40	.....	.....	.....	.....
Montana & Idaho	.....	.....	30	202	.....	.....
Total	4,454,419	3,540,062	15,048,444	11,395,760	665,220	546,461

Exports of anthracite and bituminous coal and coke from the United States to Canada, by months, during 1923 and 1924 were:

	Anthracite		Bituminous		Coke	
Month	1923	1924	1923	1294	1923	1924
January	347,337	267,540	1,001,650	745,232	65,859	37,720
February	323,150	303,504	730,112	944,016	58,142	39,778
March	393,247	305,479	919,228	822,175	65,060	104,261
April	413,392	240,013	889,900	542,358	61,165	29,610
May	438,889	267,587	1,582,879	910,563	62,238	32,875
June	411,515	335,154	1,822,723	1,186,172	45,663	39,691
July	437,236	279,088	1,697,580	1,202,400	49,728	40,438
August	435,801	246,316	1,753,972	1,049,346	68,364	34,953
Sept'ber	167,765	321,282	1,513,923	1,201,280	72,110	34,906
October	398,330	355,592	1,247,952	1,293,963	52,370	47,547
Nov'ber	359,238	273,932	1,027,066	771,113	34,898	53,299
Dec'ber	328,519	314,575	850,469	727,142	31,623	51,783
Total	4,454,419	3,540,062	15,048,044	11,395,760	665,220	546,461

Italian Fuel Imports.

The following figures, transmitted to the Department of Commerce by its foreign representatives, show the tonnage of coal, coke and manufactured fuel imported into Italy during 1922 and 1923, together with countries of origin.

	Metric tons	
Country of origin	1922	1923
Belgium	20,529	(*)
France	428,150	514,547
Germany, commerce	113,787	117,281
Germany, reparations	2,621,335	1,479,736
Yugoslavia	29,988	34,791
Great Britain	5,774,365	6,506,676
Switzerland	3,819	(*)
United States	128,443	486,112
Other countries	15,311	28,126
Total	9,135,747	9,167,269
Exports: Total	169,755	135,493

(*) Not reported separately.

Bunker Coal Supplied Steamers in Foreign Trade

The following figures giving the amount of bunker coal supplied to steamers in the foreign trade during 1923 and 1924 by customs districts have been compiled in the Coal Division, Bureau of Foreign and Domestic Commerce, from official statistics:

Customs Districts	1923	1924	Customs Districts	1923	1924
Maine & N. Hamp.	1,917	5,457	Galveston	8,471	13,561
Massachusetts	23,778	29,566	Sabine	70	.....
New York	1,747,044	1,174,630	Wisconsin	1,639	2,205
Philadelphia	285,632	232,299	Ohio	190,618	162,949
Maryland	285,249	203,823	Michigan	81,200	66,762
Virginia	1,178,673	1,482,962	Duluth & Superior	1,996	3,036
St. Lawrence	41,965	49,165	Buffalo	18,508	17,841
Rochester	24,318	22,284	Chicago	19,012	24,459
Rhode Island	350	.....	Washington	1,828	4,880
North Carolina ..	1,288	748	Los Angeles	1,046	390
South Carolina ...	29,021	34,753	San Francisco.....	51,449	31,832
Georgia	14,057	18,069	Oregon	4,136	10,070
Florida	109,158	100,016	Porto Rico	13,516	18,034
Mobile	86,447	74,986	Alaska	115	1,193
New Orleans	303,957	185,724	Hawaii	20,885	10,817
Total gross tons.				4,547,343	3,982,511

A Misleading Average.

The U. S. Geological Survey has again issued a statement of the value of anthracite produced, figuring out an average per ton of $6.08 for the year 1923.

This is probably one of the most useless tables prepared by the Government and a source of much trouble to the coal trade. If the work of compilation were directed by someone with a sense of trade customs, such a misleading figure would not be sent abroad.

It really means nothing, as the smallest sized mine fuel as well as the prepared sizes are all included together, the results being a figure that represents neither the price paid by the public nor the price of mine fuel, but a hybrid combination of both.

How great is the variation may be seen in the fact that mine fuel in the Schuylkill region is put down at only 72 cents per ton, whereas the values of all sizes shipped, to say nothing of the prepared sizes only, is put down as $6.31.

But, no doubt, the average figure presented with the stamp of Governmental authority upon it will travel far and wide and the dealers generally throughout the country will be called upon to explain an extra margin of $2.50 a ton, at least. For people will say, the Government shows that the average price is $6.08. We have to pay $15, the freight is $3, consequently the dealer has a margin of about $6, and so on.

DESTINATIONS OF BRITISH COAL EXPORTS

Big Falling Off in Tonnage Movement Offshore Compared with 1923 —Large Decrease to Germany and France.

Exports of fuel (gross tons) from Great Britain and bunker tonnage supplied during 1924 and four years previous were:

Grades	1920	1921	1922	1923	1924
Russia	92,899	138,378	584,069	476,205	37,650
Finland	.....	.....	212,201	482,073	522,002
Sweden	1,372,478	1,232,904	2,522,820	3,168,367	3,549,916
Norway	800,917	694,316	1,566,969	1,609,758	1,821,798
Denmark	1,040,107	1,803,561	2,866,233	3,170,269	3,551,091
Germany	13,457	817,877	8,345,606	14,806,232	6,824,071
Netherlands	239,067	1,787,678	6,069,789	6,794,346	2,743,903
Austria-Hungary	99,258	.....	.....	.....	.....
Belgium	671,385	618,066	3,489,419	6,504,592	3,329,885
France	11,690,922	6,395,651	13,579,417	18,826,352	14,534,844
Portugal, incl. Azores, etc.	416,999	456,285	784,356	834,982	986,387
Spain	290,141	1,021,472	1,711,021	1,145,801	1,499,038
Canary Islands	382,249	160,304	524,815	610,846	686,876
Italy	2,905,217	3,383,083	6,341,743	7,592,735	6,706,198
Greece	98,238	248,554	428,647	463,070	641,716
Algeria	510,837	455,364	1,032,282	1,060,180	1,244,423
French West Africa	111,297	48,730	119,327	143,676	113,466
Portuguese West Africa	280,771	107,022	193,667	242,282	241,111
Chile	7,122	22,624	84,311	19,091	67,431
Brazil	158,144	242,223	1,013,221	1,151,629	798,298
Uruguay	117,480	221,847	502,533	404,894	419,982
Argentine Republic	273,668	887,344	2,021,092	2,461,074	3,115,880
Channel Islands	123,538	113,964	160,636	164,179	177,164
Gibraltar	1,134,326	367,750	689,428	452,700	577,191
Malta	420,785	206,108	214,396	297,804	333,281
Egypt	985,423	1,017,748	1,743,643	1,696,054	1,809,635
Sudan	151	6,835	18,726	1,006	.....
Aden and Dependencies	27,842	70,073	92,964	64,209	78,798
British India	535	531,561	999,159	84,745	100,776
Ceylon	14,539	140,307	232,675	168,837	169,759
United States	.....	.....	3,093,919	757,714	101,151
Canada	.....	.....	837,418	369,231	278,934
Irish Free State	.....	.....	.....	1,485,425	2,471,856
Other countries	652,081	1,462,453	2,047,386	1,940,326	2,116,762

Tonnage by Grades.

Country	1920	1921	1922	1923	1924
Total, anthracite	1,641,190	1,463,668	2,520,275	3,181,814	3,083,687
Total, steam	20,137,411	18,372,185	48,108,602	58,993,990	43,803,957
Total, gas	2,204,571	3,740,744	9,197,544	9,102,450	8,434,869
Total, household	76,059	228,246	616,418	1,448,271	1,865,801

Country	1920	1921	1922	1923	1924
Total, other sorts.....	872,622	855,709	8,755,545	6,732,944	4,462,959
Grand total	24,931,853	24,660,552	64,198,384	79,459,469	61,651,273
Coke	1,372,931	736,213	2,513,978	3,970,207	2,813,411
Patent fuel	2,258,111	850,074	1,227,114	1,066,843	1,067,207
Total, fuel, all kinds..	28,562,895	26,246,839	67,939,476	84,486,728	65,531,891
Bunkers, foreign.....	13,840,360	10,926,444	18,259,027	18,158,188	17,689,000

Great Britain—Weekly Output—1924.

FIFTY-TWO WEEKS' SUMMARY.

The total production weekly of coal during 1924 was as follows:

Week Ending	Tons	Week Ending	Tons	Week Ending	Tons
Jan. 5.....	4,476,200	May 10.....	5,219,600	Sept. 13.....	4,906,700
Jan. 12.....	5,746,800	May 17.....	5,658,900	Sept. 20.....	5,134,900
Jan. 19.....	5,848,000	May 24.....	5,436,400	Sept. 27.....	5,208,300
Jan. 26.....	4,717,100	May 31.....	5,308,300	Oct. 4.....	5,155,300
Feb. 2.....	5,244,900	June 7.....	5,120,200	Oct. 11.....	5,088,300
Feb. 9.....	5,803,800	June 14.....	3,235,730	Oct. 18.....	5,146,500
Feb. 16.....	5,821,400	June 21.....	5,173,400	Oct. 25.....	5,061,100
Feb. 23.....	5,802,300	June 28.....	5,170,000	Nov. 1.....	5,042,600
March 1.....	5,702,300	July 5.....	4,988,000	Nov. 8.....	5,136,600
March 8.....	5,742,100	July 12.....	5,002,200	Nov. 15.....	5,231,700
March 15.....	5,778,300	July 19.....	4,903,600	Nov. 22.....	5,309,200
March 22.....	5,786,200	July 26.....	4,488,600	Nov. 29.....	5,303,400
March 29.....	5,745,300	Aug. 2.....	5,010,300	Dec. 6.....	5,336,300
April 5.....	5,851,900	Aug. 9.....	3,446,100	Dec. 13.....	5,413,400
April 12.....	5,944,300	Aug. 16.....	5,193,100	Dec. 20.....	5,560,500
April 19.....	4,994,300	Aug. 23.....	5,279,000	Dec. 27.....	3,432,700
April 26.....	4,049,400	Aug. 30.....	5,113,200		
May 3.....	5,684,700	Sept. 6.....	5,180,400		

Pittsburgh & Shawmut RR. Shipments.

Shipments of bituminous coal over the Pittsburgh & Shawmut RR., during 1924 and five years previous, were:

Month	1919	1920	1921	1922	1923	1924
January	205,423	225,564	196,952	126,282	212,291	133,459
February	121,355	208,216	161,647	157,101	163,696	121,421
March	114,517	265,869	150,262	183,152	219,443	97,522
April	140,997	198,033	40,516	28,299	114,910	97,806
May	177,723	238,184	94,344	32,023	115,320	103,312
June	161,072	214,356	90,501	53,213	135,009	117,776
July	169,991	258,209	84,274	47,993	133,720	109,740
August	223,409	213,235	111,935	144,942	167,475	115,405
September	223,278	243,080	154,099	112,354	118,659	122,169
October	253,447	254,941	160,660	76,284	101,236	146,803
November	46,815	243,201	159,908	146,386	99,426	144,300
December	141,354	265,153	113,815	181,995	125,082	174,178
Total	1,979,381	2,828,041	1,518,912	1,290,024	1,706,267	1,483,891

BRITISH COAL TRADE: 1906-1924

The following table shows production, exports and foreign bunker trade of British coal (gross tons) for the years 1906 to 1924:

Year	Production	Exports		
		All Coal	Anthracite incl. in "all coal"	Foreign Bunker
1906	251,050,809	56,599,771	1,856,313	18,590,213
1907	267,828,276	63,600,947	2,127,903	18,618,828
1908	261,512,214	62,547,175	2,274,792	19,474,174
1909	263,758,562	63,076,799	2,535,903	19,713,907
1910	264,293,588	62,085,476	2,425,932	19,525,735
1911	271,845,924	64,599,266	2,454,523	19,264,189
1912	260,567,552	64,445,004	2,547,712	18,291,370
1913	287,411,869	73,400,118	2,976,389	21,031,507
1914	265,643,030	59,039,880	2,389,190	18,535,579
1915	253,590,810	43,534,771	2,227,231	13,630,964
1916	256,375,366	38,351,553	1,999,503	12,988,172
1917	248,375,366	34,995,787	1,384,086	10,227,952
1918	227,714,579	31,752,904	1,162,090	8,756,476
1919	229,743,128	35,249,568	1,606,126	12,021,242
1920	229,531,194	24,931,853	1,641,190	13,840,360
1921	164,354,200	24,660,552	1,463,668	10,926,444
1922	262,846,200	64,198,384	2,520,275	18,259,027
1923	278,500,000	79,459,469	3,181,814	18,158,188
1924	269,134,000	61,651,273	3,083,687	17,689,000

Nova Scotia Output—1874-1924

(Short tons)

Year	Output	Year	Output	Year	Output
1874	977,446	1891	2,290,158	1908	6,805,489
1875	874,905	1892	2,175,913	1909	5,718,871
1876	794,804	1893	2,489,807	1910	6,515,162
1877	848,396	1894	2,520,707	1911	7,125,551
1878	863,075	1895	2,239,727	1912	7,834,724
1879	882,863	1896	2,537,706	1913	8,135,104
1880	1,150,635	1897	2,020,835	1914	7,448,042
1881	1,250,183	1898	2,584,175	1915	7,513,739
1882	1,529,708	1899	3,209,296	1916	6,911,995
1883	1,503,259	1900	3,694,646	1917	6,345,335
1884	1,556,011	1901	4,279,557	1918	5,836,370
1885	1,514,470	1902	5,292,538	1919	5,790,196
1886	1,682,924	1903	5,841,429	1920	6,437,156
1887	1,871,330	1904	5,747,823	1921	5,734,928
1888	1,989,263	1905	5,821,622	1922	5,569,072
1889	1,967,032	1906	6,546,191	1923	6,595,503
1890	2,222,081	1907	6,468,563	1924	5,569,387

British Coal Prices, 1924.

Monthly record of highest and lowest market quotations for Welsh coal, coke and patent fuel during the year 1924:

	January		February		March		April	
	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest
Best Admiralties	30 0	28 0	31 6	29 0	33 0	28 0	33 0	29 0
Second "	29 0	27 0	30 0	27 6	32 6	27 6	32 0	28 0
Ordinary steams	28 0	26 0	29 0	26 6	30 0	26 0	30 0	26 6
Best small steams	22 6	20 6	23 0	20 0	23 6	18 0	23 6	20 0
Ordinary " "	22 0	19 0	22 0	18 6	22 6	17 6	22 6	19 0
Cargo "	21 0	17 6	21 0	17 0	21 6	16 0	21 6	17 0
Best dry coals	27 6	27 0	30 0	27 0	31 0	27 0	31 0	28 0
Ordinary dry coals	27 0	25 0	28 0	25 0	29 0	26 0	29 0	26 0
Patent fuel	32 6	30 0	32 6	30 0	32 6	29 0	32 6	29 0
Coke—export	60 0	45 0	60 0	50 0	57 6	30 0	60 0	39 0
" blast furnace	35 0	30 0	35 0	30 0	45 0	30 0	35 0	30 0
" foundry	45 0	40 0	45 0	40 0	57 6	40 0	45 0	40 0

	May		June		July		August	
	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest
Best Admiralties	29 0	27 6	28 6	27 6	29 0	28 0	29 0	28 0
Second "	28 0	26 6	28 0	26 6	28 0	26 6	28 0	26 0
Ordinary steams	27 0	25 6	27 0	26 0	27 0	25 6	26 6	25 0
Best small steams	19 6	17 6	18 6	17 6	18 6	16 0	17 6	16 0
Ordinary " "	18 6	16 6	18 0	17 0	18 0	15 0	16 6	15 0
Cargo "	17 6	15 0	17 0	15 0	17 0	14 0	15 0	14 0
Best dry coals	27 6	26 0	30 0	26 6	27 6	26 0	27 0	26 6
Ordinary dry coals	26 0	25 0	26 0	25 0	26 0	25 0	26 0	25 0
Patent fuel	30 0	28 0	30 0	28 0	29 6	27 6	29 6	27 0
Coke—export	57 6	42 6	57 6	47 6	57 6	30 0	55 0	42 6
" blast furnace	35 0	30 0	35 0	30 0	35 0	27 6	32 6	27 6
" foundry	45 0	40 0	45 0	40 0	45 0	40 0	45 0	37 6

	September		October		November		December	
	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest
Best Admiralties	29 0	27 6	27 9	27 0	27 6	27 0	28 0	27 3
Second "	28 0	25 6	27 0	25 0	26 6	25 0	27 0	25 0
Ordinary steams	26 6	24 6	25 0	23 6	24 6	23 6	24 6	24 0
Best small steams	17 0	14 6	16 0	14 6	17 0	16 0	17 6	16 0
Ordinary " "	16 6	14 0	15 0	12 6	16 0	14 0	15 6	14 6
Cargo "	15 0	13 0	14 6	12 6	14 6	12 6	14 6	13 0
Best dry coals	28 0	26 0	28 0	26 6	28 0	27 0	27 9	27 0
Ordinary dry coals	26 0	25 0	26 0	24 0	26 0	24 0	25 6	24 0
Patent fuel	29 0	25 6	28 0	25 0	27 6	25 6	27 0	25 6
Coke—export	52 6	35 0	52 6	30 0	50 0	30 0	50 0	30 0
" blast furnace	32 6	27 6	32 6	25 0	30 0	25 0	30 0	25 0
" foundry	42 6	37 6	50 0	35 0	50 0	35 0	40 0	30 0

British Ports' Foreign Shipments.

Shipments of coal to foreign countries, British Dominions and possessions from the various districts in the United Kingdom monthly during 1924 and yearly for four years previous are shown below:

Month	Bristol Channel ports	North-western ports	North-eastern ports	Humber ports	Other ports on the east coast
January	2,308,345	130,735	1,832,167	493,056	65,773
February	2,038,369	102,295	1,836,567	371,602	24,808
March	2,292,077	168,924	1,766,994	347,326	16,476
April	2,246,599	108,727	1,763,851	275,554	11,298
May	2,307,623	125,802	1,911,391	358,359	13,545
June	1,940,273	112,109	1,745,548	360,137	30,498
July	2,336,794	129,367	1,832,386	456,081	10,527
August	1,987,136	117,426	1,769,215	487,325	31,994
September	2,059,719	132,777	1,683,284	439,736	22,525
October	2,008,426	137,039	1,624,468	402,530	26,127
November	2,005,027	107,673	1,568,145	404,947	23,991
December	2,151,952	116,974	1,764,897	383,101	16,552
Total (1924)	25,682,340	1,489,848	21,098,913	4,779,754	294,114
1920	15,470,392	8,220	7,508,854	470,233	137,955
1921	12,246,650	88,382	8,730,221	1,126,675	47,892
1922	25,633,826	776,171	22,596,218	5,884,668	389,617
1923	30,129,733	2,101,307	25,366,599	9,363,324	780,962

Month	Other English ports	East Scotland	West Scotland	Ireland	United Kingdom
January	....	465,915	2,071,719	82,536	61,651,273
February	....	564,347	138,324	6,322	5,440,637
March	....	430,926	131,530	5,530	5,075,048
April	....	488,888	159,405	8,137	5,190,265
May	....	571,215	161,346	6,678	5,062,941
June	....	520,850	186,936	5,004	5,479,875
July	....	487,115	166,373	6,503	4,882,291
August	261	505,518	228,339	7,280	5,487,889
September	....	551,127	168,781	7,088	5,074,744
October	....	542,320	201,704	7,534	5,098,406
November	....	484,026	184,317	7,625	4,932,852
December	22	539,519	157,214	7,777	4,758,800
Total (1924)	283	6,151,766	187,450	7,058	5,167,525
1920	212	1,227,374	1,891,446	....	64,198,384
1921	135	1,996,857	2,461,130	61,647	79,459,469
1922	1,790	7,024,648	423,740	....	24,660,552
1923	89	9,194,678	108,613	....	24,931,853

The Luena coal field, on the Belgian Congo, is estimated to contain 12,000,000 tons, but of these only 7,000,000 tons are workable. The Luena Coal Co. has searched for coal in other parts of Katanga, and has located a deposit of about 1,000,000 tons in the Lukuga district.

GROWTH OF EXPORT TRADE

Great Increase in Tonnage Movement in Past Thirty-Odd Years.

Frequently statistics are presented covering so brief a period that in these times of unusual coal trade conditions, we overlook the great change that has taken place in the progress of the trade. The trend of events is often best illustrated by a tabulation extending over a considerable period of years.

Such information is particularly useful with regard to our export trade, in which there has been so notable a growth during the past generation. While for many years exports of coal were very largely to Canada only, so far as any material volume of business was concerned, even the Canadian trade was very small back in the '80s.

The facts in connection with this line of business are well illustrated by the statistical data presented below, showing first the aggregate exports of bituminous coal, and in the second instance the exports to Canada, both anthracite and bituminous:

Exports of Bituminous Coal.

Year	Gross Tons	Year	Gross Tons	Year	Gross Tons
1924	15,262,739	1911	13,874,754	1898	2,682,414
1923	19,154,981	1910	10,784,239	1897	2,384,069
1922	11,083,112	1909	9,693,843	1896	2,246,284
1921	20,660,933	1908	9,100,819	1895	2,374,988
1920	34,269,735	1907	10,448,676	1894	2,178,321
1919	17,987,666	1906	7,704,850	1893	1,773,556
1918	22,350,730	1905	6,959,265	1892	1,700,496
1917	23,839,558	1904	6,345,126	1891	1,474,727
1916	18,490,603	1903	6,303,241	1890	1,138,681
1915	16,565,043	1902	5,400,694	1889	841,798
1914	13,801,850	1901	5,763,469	1888	780,248
1913	17,986,757	1900	5,411,329		
1912	14,459,987	1899	3,478,976		

Exports to Canada.

Year	Anthracite, Gross Tons	Bituminous, Gross Tons	Year	Anthracite, Gross Tons	Bituminous, Gross Tons
1924	3,540,062	11,395,760	1913	3,890,267	13,268,383
1923	4,454,419	15,027,454	1912	3,435,765	10,258,336
1922	2,296,333	9,677,320	1911	3,498,980	10,609,587
1921	3,938,559	11,758,634	1910	2,963,788	7,567,297
1920	4,435,933	14,481,844	1909	2,802,361	6,980,213
1919	4,349,164	10,270,490	1908	2,710,308	6,542,635
1918	4,190,226	13,016,820	1907	2,648,769	7,194,546
1917	5,025,185	16,192,714	1906	2,176,342	5,357,004
1916	3,862,505	12,849,589	1905	2,187,450	4,777,180
1915	3,230,285	8,464,457	1904	2,193,746	4,384,208
1914	3,568,050	9,199,016			

American and British Coal to France.

Imports of coal into France from the United States and Great Britain during 1922, 1923 and 1924, were:

Month	From United States			From Great Britain		
	1922	1923	1924	1922	1923	1924
January	...	....	15,285	253,375	1,385,291	1,283,981
February	3,785	....	58,928	1,206,442	1,372,062	1,296,589
March	8,227	3,495	34,084	1,237,815	1,805,214	1,381,489
April	....	175,518	78,551	955,346	1,542,627	1,281,030
May	....	238,427	28,949	1,062,774	1,772,996	1,347,654
June	....	135,849	65,615	982,071	1,631,986	1,087,943
July	....	97,028	26,752	994,675	1,699,225	1,222,106
August	....	85,543	37,401	939,588	1,560,923	1,121,287
September	....	36,990	27,067	1,108,927	1,300,479	1,154,920
October	....	27,045	24,004	1,143,552	1,708,154	1,117,655
November	....	30,272	11,945	1,384,063	1,667,990	1,084,371
December	....	12,502	12,313	2,310,789	1,332,771	1,155,819
Total	12,012	842,669	420,894	13,579,417	18,826,352	14,534,844

In addition to the above there were 598 tons of American anthracite coal imported into France in 1924.

British Coal Imported.

Imports of coal from Great Britain during the past 13 years were:

Year	Tons	Year	Tons	Year	Tons
1912	10,190,948	1917	17,512,545	1921	6,395,651
1913	12,775,909	1918	16,511,005	1922	13,579,417
1914	12,330,545	1919	16,204,596	1923	18,826,352
1915	17,001,361	1920	11,690,922	1924	14,534,844
1916	17,311,877				

Bunker Tonnage at Principal Atlantic Ports.

Tonnage of coal loaded on board vessels engaged in the foreign trade from New York, Philadelphia, Baltimore and Hampton Roads ports for bunker use in the years specified was:

Month	New York		Philadelphia		Baltimore		Hamp. Roads	
	1923	1924	1923	1924	1923	1924	1923	1924
Jan.	123,439	100,315	16,130	20,138	13,688	19,856	92,741	127,001
Feb.	145,949	113,078	19,889	22,860	9,990	18,495	80,282	123,515
Mar.	143,976	95,095	27,998	13,535	18,676	15,182	98,202	128,108
Apr.	117,094	111,927	32,122	18,917	31,465	18,995	104,110	137,008
May	150,118	98,547	25,932	18,176	47,385	24,152	116,569	131,303
June	172,302	115,333	27,581	15,250	44,991	12,158	91,514	116,747
July	153,418	91,855	29,749	22,393	37,599	17,718	115,883	131,421
Aug.	191,270	96,870	28,541	17,641	20,728	14,761	106,046	99,301
Sept.	180,644	87,657	24,856	23,669	20,570	15,111	76,466	97,988
Oct.	149,929	105,474	13,798	22,042	14,884	14,896	94,729	123,687
Nov.	125,736	75,528	21,503	15,672	9,601	11,531	89,654	110,522
Dec.	93,169	82,951	17,533	22,006	15,672	20,968	112,477	156,361
Total	1,747,004	1,174,630	285,632	232,299	285,249	203,823	1,178,673	1,482,962

Imports of Coal into Canada by Grades and by Provinces.

Imports of coal into Canada by grades and by provinces for the twelve months ending December 31, 1924, were (short tons):

Province	Source	Anthracite		Bituminous	
		Egg, Nut, Etc.	Dust	Round	Slack
Nova Scotia	United States	37,616	.....	60,209	6,959
	Great Britain	12,461	.....	246	.....
Prince Edward Island	United States	3,571	.....	3,579	.....
New Brunswick	United States	58,681	251	42,657	29,880
	Great Britain	25,579	.....	15	.....
Quebec	United States	933,390	157,181	993,281	532,235
	Great Britain	229,142	.....	18,708	21,134
Ontario—Central	United States	2,526,400	65,310	6,551,833	2,282,102
	Great Britain	6,251	1,844	.....	.....
Ontario—Head of Lakes	United States	89,288	.....	1,587,075	316,838
Manitoba	United States	30,324	3,898	43,384	100,225
Saskatchewan	United States	1,687	33	1,028	1,533
Alberta	United States	.....	.....	826	383
British Columbia	United States	687	.....	35,507	15,305
Yukon	United States	.....	.....	24	.....
Canada	United States	3,681,644	226,673	9,319,421	3,285,460
	Great Britain	273,433	1,844	18,969	21,134

It often happens that large quantities of bituminous coal are brought into Canada but are not cleared from customs until required for use owing to the fact that there is a duty of 53 cents a ton collected on all bituminous coal round and run-of-mine imported.

Anthracite Coal Exports to Various Countries.

Exports of anthracite coal from the United States to various countries during the calendar years 1923 and 1924 were:

	1923	1924		1923	1924
France	4,274	598	Newfoundland and Labrador	5,309	10,354
Mexico	3,781	15,884	Barbados	100	282
Cuba	62,643	6,389	Other B. W. I.	145	155
Argentina	75	....	Dominican Republic.	9,328	4,769
Brazil	....	5	Colombia	15	34
Chile	451	5	Peru	....	564
Greece	3	....	Venezuela	15	21
Bermuda	1,971	1,833	Costa Rica	2	11
British Honduras	362	37	England	4	1,293
Canada	4,454,419	3,540,062	Haiti	90	40
Guatemala	122	40	Dutch W. Indies	....	2
Honduras	3	....	British Guiana	....	3
Nicaragua	1	4	French Oceania	....	1
Panama	....	350	Ecuador	49	11
Salvador	13	2	Total	4,544,766	3,588,036
Miq., Langley, etc.	270	179			

Cubic Area of Various Coals.

Weight of Cubic Foot and Number of Feet to the Ton of Anthracite and Bituminous Coals.

Anthracite—	Pounds in Cubic Foot	Cubic Feet Per Net Ton
Wilkes-Barre or Plymouth		
Egg	55.1	36.3
Egg—Free Burning	56.07	35.69
Egg, Small	55.7	35.9
Stove	56.0	35.7
Stove—Free Burning	56.33	35.5
Chestnut	57.3	34.9
Nut—Free Burning	56.88	35.16
Pea	54.8	36.5
Buckwheat	57.0	35.1
Lehigh Lump	55.26	36.19
Broken	56.85	35.18
Egg	57.74	34.63
Stove	58.15	34.39
Nut	58.26	34.32
Pea	53.18	37.6
Buckwheat	54.04	37.01
Dust	57.25	34.93

Anthracite—	Pounds in Cubic Foot	Cubic Feet Per Net Ton
Schuylkill Buckwheat	59.6	33.6
Pea	55.	36.4
Chestnut	58.6	34.1
Small Egg	55.	36.4
Large Egg	53.7	37.2
Range	58.5	34.2
Scranton Buckwheat	57.6	34.7
Chestnut	57.4	34.8
Range	54.5	36.7
Small Egg	56.6	35.3
Large Egg	57.1	35.
Susquehanna Buck	53.9	37.1
Pea	54.6	36.6
Chestnut	56.1	35.7
Range	55.2	36.2
Small Egg	55.5	36.
Large Egg	54.7	36.6

The above figures gathered from many sources, old and new, hence certain peculiarities of sizes specified. Some differences will be noted in all cubic area tables because of differences in moisture, degree of preparation, proportion of undersizing, etc.

Details Concerning Soft Coal, Charcoal and Coke.

Bituminous—		
Bell County, Ky., Lump	44.4	45.0
Nut and Slack	53.4	37.4
Carterville Egg	51.8	38.6
Nut	46.1	43.4
No. 2 Washed Nut.	48.1	41.6
1½-inch Screenings	54.9	36.4
Franklin County, Ill., 6" Lump (Christopher)	47.8	41.8
Egg (Christopher)	47.9	41.8
Egg (Small)	43.5	46.3
Range (Zeigler)	45.9	44.3
Screenings	50.1	39.9
Fulton County, Ill., Screenings (Cuba)	53.1	37.3

Bituminous—		
Greene County, Indiana, Mine Run	53.3	37.5
Grundy County, Ill., Nut Pea (washed)	48.8	40.9
Harlan County, Ky., Lump	44.4	45.0
Nut Pea (washed)	48.8	40.9
Harrisburg Screenings.	52.8	37.9
Hocking Lump	50.2	39.8
Illinois, Typical	47.22	42.35
Indiana Block	43.	46.5
Iowa Lump	46.51	43.
Screenings	49.3	40.5
Jackson, Ohio, Lump	54.2	36.9
Kentucky Dean Seam, Lump and Egg	49.8	40.2

Bituminous—	Pounds in Cubic Feet	Cubic Feet Per Net Ton
Knox Co., Ind., Egg	49.7	40.2
Lump	49.8	40.2
Nut and Slack	52.2	38.3
Screenings	49.9	40.0
McDowell County, W. Va., Lump (Splint)	46.4	43.1
Lump	53.4	37.5
Mine Run (Pocahontas)	56.9	33.6
Maryland Smithing (Georges Creek)	64.4	31.1
Ohio Cannel	49.18	40.66
Pike County, Ind., 1¼"		
Screenings	53.2	37.6
Washed Nut	45.7	43.8
Mine Run	51.0	39.2
Pocahontas Egg and Lump	52.27	38.28
Mine-Run	59.6	33.6
Pittsburgh	46.48	43.03
Saline County, Ill., Screenings	52.8	37.9
Charcoal—		
Hardwood	19.	105.25
Pine	18.	111.11

Bituminous—	Pounds in Cubic Feet	Cubic Feet Per Net Ton
Sangamon County, Ill.,		
No. 4 Washed Nut.	44.8	44.6
Washed screenings	50.1	39.9
Splint Block	46.4	43.1
Vermilion County, Indiana, Egg (Forked)	42.6	46.9
Egg (Shoveled)	44.5	44.9
Lump (Forked)	45.0	43.4
Nut	47.0	42.6
Mine-Run	58.9	34.0
Screenings	53.2	37.6
Vigo County, Indiana, Mine Run	49.2	40.6
Williamson County, Ill.,		
1½" Screenings	54.9	36.4
No. 2 Washed Nut	48.1	41.6
No. 4 Washed Nut	46.1	43.4
No. 5 Washed Nut	45.5	44.0
Egg (Carterville)	51.8	38.0
Nut (Washed)	49.1	40.7
Wilmington, Washed, Nut and Pea	48.8	40.9
Youghiogheny ¾" Lump	66.8	29.9
Coke	28.	71.43
Chestnut-Solvay	31.9	62.6
Connellsville	26.3	76.04
Egg-Solvay	28.6	69.9

A Bushel of Coal.

The weight of a bushel of coal as established by law is:

In Indiana	70 lbs.
In Pennsylvania	76 lbs.
In Alabama, Colorado, Georgia, Illinois, Ohio, Tennessee and West Virginia	80 lbs.

A net ton (2,000 lbs.) would contain the following:

In Indiana	28.57 bushels
In Pennsylvania	26.32 bushels
In Alabama, Colorado, Georgia, Illinois, Ohio, Tennessee and West Virginia	25.00 bushels

There is no such thing as a legal bushel of coal in New York City. No law or ordinance affecting same has ever been passed as in other cities and States, and consequently a bushel as a unit for coal handling is not recognized. To a large degree coal calculations based on bushels are a survival of early days on the Ohio and Kanawha Rivers when this method of calculation seemed to be in general favor. In the retail trade the idea has generally been that it afforded too much opportunity for intentional or unintentional discrepancies.

Gross and Net Prices; 50 Cents to $15.00

The light figures represent price per gross ton (2,240 lbs.) The bold-face figures will give corresponding price per net ton (2,000 lbs.).

Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net
$.50	$.45	$1.46	$1.30	$3.55	$3.17	$5.75	$5.13	$7.95	$7.10	$10.15	$9.06
.55	.49	1.47	1.31	3.60	3.21	5.80	5.18	8.00	7.14	10.20	9.11
.60	.54	1.48	1.32	3.65	3.26	5.85	5.22	8.05	7.19	10.25	9.15
.65	.58	1.50	1.34	3.70	3.30	5.90	5.27	8.10	7.23	10.30	9.20
.70	.63	1.55	1.38	3.75	3.35	5.95	5.31	8.15	7.28	10.35	9.24
.75	.67	1.60	1.43	3.80	3.39	6.00	5.36	8.20	7.32	10.40	9.29
.80	.71	1.65	1.47	3.85	3.44	6.05	5.40	8.25	7.37	10.45	9.33
.85	.76	1.70	1.52	3.90	3.48	6.10	5.45	8.30	7.41	10.50	9.38
.90	.80	1.75	1.56	3.95	3.53	6.15	5.49	8.35	7.46	10.55	9.42
.95	.85	1.80	1.61	4.00	3.57	6.20	5.54	8.40	7.50	10.60	9.47
1.00	.89	1.85	1.65	4.05	3.62	6.25	5.58	8.45	7.54	10.65	9.51
1.05	.94	1.90	1.70	4.10	3.66	6.30	5.62	8.50	7.59	10.70	9.56
1.10	.98	1.95	1.74	4.15	3.71	6.35	5.67	8.55	7.63	10.75	9.60
1.15	1.03	2.00	1.79	4.20	3.75	6.40	5.71	8.60	7.68	10.80	9.64
1.16	1.04	2.05	1.83	4.25	3.79	6.45	5.76	8.65	7.72	10.85	9.69
1.17	1.04	2.10	1.88	4.30	3.84	6.50	5.80	8.70	7.77	10.90	9.73
1.18	1.05	2.15	1.92	4.35	3.88	6.55	5.85	8.75	7.81	10.95	9.78
1.19	1.06	2.20	1.96	4.40	3.93	6.60	5.89	8.80	7.86	11.00	9.82
1.20	1.07	2.25	2.01	4.45	3.97	6.65	5.94	8.85	7.90	11.05	9.87
1.21	1.08	2.30	2.05	4.50	4.02	6.70	5.98	8.90	7.95	11.10	9.91
1.22	1.09	2.35	2.10	4.55	4.06	6.75	6.03	8.95	7.99	11.15	9.96
1.23	1.10	2.40	2.14	4.60	4.11	6.80	6.07	9.00	8.04	11.20	10.00
1.24	1.11	2.45	2.19	4.65	4.15	6.85	6.12	9.05	8.08	11.25	10.05
1.25	1.12	2.50	2.23	4.70	4.20	6.90	6.16	9.10	8.13	11.30	10.09
1.26	1.13	2.55	2.28	4.75	4.24	6.95	6.21	9.15	8.17	11.35	10.14
1.27	1.13	2.60	2.32	4.80	4.29	7.00	6.25	9.20	8.23	11.40	10.18
1.28	1.14	2.65	2.37	4.85	4.33	7.05	6.29	9.25	8.26	11.45	10.22
1.29	1.15	2.70	2.41	4.90	4.38	7.10	6.34	9.30	8.30	11.50	10.27
1.30	1.16	2.75	2.46	4.95	4.42	7.15	6.38	9.35	8.35	11.55	10.31
1.31	1.17	2.80	2.50	5.00	4.46	7.20	6.43	9.40	8.39	11.60	10.36
1.32	1.18	2.85	2.54	5.05	4.51	7.25	6.47	9.45	8.44	11.65	10.40
1.33	1.19	2.90	2.59	5.10	4.55	7.30	6.52	9.50	8.48	11.70	10.45
1.34	1.20	2.95	2.63	5.15	4.60	7.35	6.55	9.55	8.53	11.75	10.49
1.35	1.21	3.00	2.68	5.20	4.64	7.40	6.61	9.60	8.57	11.80	10.54
1.36	1.21	3.05	2.72	5.25	4.69	7.45	6.65	9.65	8.62	11.85	10.60
1.37	1.22	3.10	2.77	5.30	4.73	7.50	6.70	9.70	8.66	11.90	10.63
1.38	1.23	3.15	2.81	5.35	4.78	7.55	6.74	9.75	8.71	11.95	10.67
1.39	1.24	3.20	2.86	5.40	4.82	7.60	6.79	9.80	8.75	12.00	10.72
1.40	1.25	3.25	2.90	5.45	4.87	7.65	6.83	9.85	8.79	12.05	10.76
1.41	1.27	3.30	2.95	5.50	4.91	7.70	6.88	9.90	8.84	12.10	10.80
1.42	1.28	3.35	2.99	5.55	4.96	7.75	6.92	9.95	8.88	12.15	10.85
1.43	1.29	3.40	3.04	5.60	5.00	7.80	6.96	10.00	8.93	12.20	10.90
1.44	1.29	3.45	3.08	5.65	5.04	7.85	7.01	10.05	8.97	12.25	10.94
1.45	1.29	3.50	3.13	5.70	5.09	7.90	7.05	10.10	9.02	12.30	10.98

Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net
$12.35	$11.03	$12.80	$11.42	$13.25	$11.83	$13.70	$12.24	$14.15	$12.63	$14.60	$13.04
12.40	11.08	12.85	11.47	13.30	11.88	13.75	12.28	14.20	12.68	14.65	13.07
12.45	11.12	12.90	11.52	13.35	11.92	13.80	12.32	14.25	12.72	14.70	13.10
12.50	11.17	12.95	11.56	13.40	11.97	13.85	12.37	14.30	12.76	14.75	13.16
12.55	11.22	13.00	11.60	13.45	12.01	13.90	12.42	14.35	12.81	14.80	13.22
12.60	11.25	13.05	11.65	13.50	12.06	13.95	12.46	14.40	12.86	14.85	13.26
12.65	11.29	13.10	11.69	13.55	12.10	14.00	12.50	14.45	12.90	14.90	13.30
12.70	11.34	13.15	11.74	13.60	12.14	14.05	12.54	14.50	12.94	14.95	13.35
12.75	11.38	13.20	11.78	13.65	12.19	14.10	12.58	14.55	12.99	15.00	13.38
										15.05	13.43

Gross Weights Reduced to Net Tons and Pounds.

The following table shows gross hundredweights reduced to pounds.

Cwt. Gross	Lbs.	Cwt. Gross	Lbs.	Cwt. Gross	Lbs.	Cwt. Gross	Lbs.
1	112	6	672	11	1,232	16	1,792
2	224	7	784	12	1,344	17	1,904
3	336	8	896	13	1,456	18	2,016
4	448	9	1,008	14	1,568	19	2,128
5	560	10	1,120	15	1,680		

In the following table the period is to be understood as separating tons and hundredweights. It is not to be read as a decimal point.

Tons Gross	Net	Lbs.	Tons Gross	Net	Lbs.	Tons Gross	Net	Lbs.
1	1.02	2,240	24	26.18	53,760	47	52.13	105,280
2	2.05	4,480	25	28.00	56,000	48	53.15	107,520
3	3.07	6,720	26	29.02	58,240	49	54.18	109,760
4	4.10	8,960	27	30.05	60,480	50	56.00	112,000
5	5.12	11,200	28	31.07	62,720	51	57.02	114,240
6	6.14	13,440	29	32.10	64,960	52	58.05	116,480
7	7.17	15,680	30	33.12	67,200	53	59.07	118,720
8	8.19	17,920	31	34.14	69,440	54	60.10	120,960
9	10.02	20,160	32	35.17	71,680	55	61.12	123,200
10	11.04	22,400	33	36.19	73,920	56	62.14	125,440
11	12.06	24,640	34	38.02	76,160	57	63.17	127,680
12	13.09	26,880	35	39.04	78,400	58	64.19	129,920
13	14.11	29,120	36	40.06	80,640	59	66.02	132,160
14	15.14	31,360	37	41.09	82,880	60	67.04	134,400
15	16.16	33,600	38	42.11	85,120	61	68.06	136,640
16	17.18	35,840	39	43.14	87,360	62	69.09	138,880
17	19.01	38,080	40	44.16	89,600	63	70.11	141,120
18	20.03	40,320	41	45.18	91,840	64	71.14	143,360
19	21.06	42,560	42	47.01	94,080	65	72.16	145,600
20	22.08	44,800	43	48.03	96,320	66	73.18	147,840
21	23.10	47,040	44	49.06	98,560	67	75.01	150,080
22	24.13	49,280	45	50.08	100,800	68	76.03	152,320
23	25.15	51,520	46	51.10	103,040	69	77.06	154,560

Tons			Tons			Tons		
Gross	Net	Lbs.	Gross	Net	Lbs.	Gross	Net	Lbs.
70	70.08	156,800	86	96.06	192,640	300	336.	672,000
71	79.10	159,040	87	97.09	194,880	400	448.	896,000
72	80.13	161,280	88	98.11	197,120	500	560.	1,120,000
73	81.15	163,520	89	99.14	199,360	600	672.	1,344,000
74	82.18	165,760	90	100.16	201,600	700	784.	1,568,000
75	84.00	168,000	91	101.18	203,840	800	896.	1,792,000
76	85.02	170,240	92	103.01	206,080	900	1008.	2,016,000
77	86.05	172,480	93	104.03	208,320	1,000	1120.	2,240,000
78	87.07	174,720	94	105.06	210,560	1,100	1232.	2,464,000
79	88.10	176,960	95	106.08	212,800	1,200	1344.	2,688,000
80	89.12	179,200	96	107.10	215,040	1,300	1456.	2,912,000
81	90.14	181,440	97	108.13	217,280	1,400	1568.	3,136,000
82	91.17	183,680	98	109.15	219,520	1,500	1680.	3,360,000
83	92.19	185,920	99	110.18	221,760	2,000	2240.	4,480,000
84	94.02	188,160	100	112.	224,000	2,500	2800.	5,600,000
85	95.04	190,400	200	224.	448,000			

Table for Ascertaining the Price of a Number of Pounds at a Given Price per Ton of 2,000 Pounds.

Lbs.	$8.00	$8.25	$8.50	$8.75	$9.00	$9.25	$9.50	$9.75	$10.00	$10.25	$10.50
20	.08	.08	.09	.09	.09	.09	.10	.10	.10	.10	.11
40	.16	.17	.17	.17	.18	.18	.19	.19	.20	.21	.21
60	.24	.25	.26	.26	.27	.28	.29	.29	.30	.31	.32
80	.32	.33	.34	.35	.36	.37	.38	.39	.40	.41	.42
100	.40	.42	.43	.44	.45	.46	.48	.49	.50	.52	.53
200	.80	.83	.85	.88	.90	.92	.95	.97	1.00	1.03	1.05
300	1.20	1.25	1.28	1.32	1.35	1.38	1.43	1.46	1.50	1.55	1.58
400	1.60	1.66	1.70	1.77	1.80	1.84	1.90	1.94	2.00	2.06	2.10
500	2.00	2.06	2.13	2.19	2.25	2.31	2.38	2.44	2.50	2.56	2.63
600	2.40	2.48	2.55	2.63	2.70	2.78	2.85	2.93	3.00	3.08	3.15
700	2.80	2.89	2.98	3.07	3.15	3.24	3.33	3.41	3.50	3.59	3.68
800	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	4.00	4.10	4.20
900	3.60	3.71	3.83	3.94	4.05	4.17	4.28	4.39	4.50	4.66	4.73
1000	4.00	4.12	4.25	4.38	4.50	4.63	4.75	4.87	5.00	5.13	5.25
1100	4.40	4.54	4.68	4.81	4.95	5.09	5.23	5.36	5.50	5.64	5.78
1200	4.80	4.95	5.10	5.25	5.40	5.56	5.70	5.85	6.00	6.15	6.30
1300	5.20	5.37	5.53	5.69	5.85	6.01	6.18	6.34	6.50	6.66	6.83
1400	5.60	5.77	5.95	6.13	6.30	6.48	6.65	6.82	7.00	7.17	7.35
1500	6.00	6.19	6.38	6.56	6.75	6.94	7.13	7.31	7.50	7.69	7.88
1600	6.40	6.65	6.80	7.00	7.20	7.40	7.60	7.80	8.00	8.20	8.40
1700	6.80	7.02	7.23	7.44	7.65	7.86	8.08	8.28	8.50	8.71	8.93
1800	7.20	7.43	7.65	7.88	8.10	8.32	8.55	8.77	9.00	9.23	9.45
1900	7.60	7.84	8.08	8.31	8.55	8.78	9.03	9.26	9.50	9.74	9.98

In the Higher Prices.

Lbs.	$10.75	$11.00	$11.25	$11.50	$11.75	$12.00	$12.25	$12.50	$12.75	$13.00
20	.11	.11	.11	.12	.12	.12	.12	.13	.13	.13
40	.22	.22	.22	.23	.24	.24	.25	.25	.26	.26
60	.32	.33	.34	.35	.35	.36	.37	.38	.38	.39
80	.43	.44	.45	.46	.47	.48	.49	.50	.51	.52
100	.54	.55	.56	.58	.59	.60	.62	.63	.64	.65
200	1.08	1.10	1.12	1.15	1.18	1.20	1.23	1.26	1.28	1.30
300	1.62	1.65	1.68	1.73	1.76	1.80	1.85	1.89	1.91	1.95
400	2.15	2.20	2.24	2.30	2.34	2.40	2.46	2.52	2.56	2.60
500	2.69	2.75	2.81	2.88	2.94	3.00	3.06	3.15	3.19	3.25
600	3.23	3.30	3.38	3.45	3.52	3.60	3.68	3.78	3.83	3.90
700	3.76	3.85	3.94	4.03	4.11	4.20	4.29	4.41	4.46	4.55
800	4.30	4.40	4.50	4.60	4.70	4.80	4.90	5.04	5.10	5.20
900	4.84	4.95	5.06	5.18	5.29	5.40	5.51	5.67	5.79	5.85
1000	5.38	5.50	5.63	5.75	5.87	6.00	6.13	6.30	6.38	6.50
1100	5.91	6.05	6.19	6.33	6.46	6.60	6.74	6.93	7.01	7.15
1200	6.45	6.60	6.75	6.90	7.05	7.20	7.35	7.56	7.65	7.80
1300	6.99	7.15	7.31	7.48	7.64	7.80	7.96	8.19	8.29	8.45
1400	7.53	7.70	7.88	8.05	8.22	8.40	8.58	8.82	8.93	9.10
1500	8.06	8.25	8.44	8.63	8.81	9.00	9.19	9.45	9.56	9.75
1600	8.60	8.80	9.00	9.20	9.40	9.60	9.80	10.08	10.20	10.40
1700	9.14	9.35	9.56	9.78	9.99	10.20	10.41	10.71	10.84	11.05
1800	9.68	9.90	10.13	10.35	10.57	10.80	11.03	11.35	11.48	11.70
1900	10.21	10.45	10.69	10.93	11.16	11.40	11.63	11.98	12.11	12.35

Lbs.	$13.25	$13.50	$13.75	$14.00	$14.25	$14.50	$14.75	$15.00	$15.25	$15.50
20	.13	.14	.14	.14	.14	.15	.15	.15	.15	.16
40	.26	.27	.28	.28	.29	.29	.30	.30	.30	.31
60	.40	.41	.41	.42	.43	.44	.44	.45	.46	.47
80	.53	.54	.55	.56	.57	.58	.59	.60	.61	.62
100	.66	.68	.69	.70	.72	.73	.74	.75	.76	.78
200	1.32	1.35	1.38	1.40	1.43	1.45	1.48	1.50	1.52	1.55
300	1.98	2.03	2.06	2.10	2.15	2.18	2.21	2.25	2.29	2.33
400	2.64	2.70	2.74	2.80	2.86	2.90	2.96	3.00	3.04	3.10
500	3.30	3.38	3.43	3.50	3.56	3.63	3.69	3.75	3.81	3.88
600	3.96	4.05	4.13	4.20	4.27	4.35	4.43	4.50	4.57	4.65
700	4.62	4.73	4.80	4.90	4.99	5.08	5.16	5.25	5.34	5.43
800	5.28	5.40	5.48	5.60	5.70	5.80	5.90	6.00	6.10	6.20
900	5.94	6.08	6.17	6.30	6.41	6.53	6.64	6.75	6.86	6.98
1000	6.60	6.75	6.85	7.00	7.12	7.25	7.37	7.50	7.62	7.75
1100	7.26	7.43	7.54	7.70	7.84	7.98	8.11	8.25	8.37	8.52
1200	7.90	8.10	8.22	8.40	8.55	8.70	8.85	9.00	9.15	9.30
1300	8.56	8.78	8.91	9.10	9.26	9.43	9.58	9.75	9.91	10.08
1400	9.24	9.45	9.59	9.80	9.97	10.15	10.32	10.50	10.72	10.85
1500	9.90	10.13	10.28	10.50	10.69	10.88	11.06	11.25	11.44	11.63
1600	10.56	10.80	10.96	11.20	11.40	11.60	11.80	12.00	12.20	12.40
1700	11.22	11.48	11.65	11.90	12.11	12.33	12.53	12.75	12.96	13.18
1800	11.88	12.15	12.33	12.60	12.82	13.05	13.27	13.50	13.73	13.95
1900	12.54	12.83	13.02	13.30	13.54	13.78	14.01	14.25	14.49	14.73

Lbs.	$15.75	$16.00	$16.25	$16.50	$16.75	$17.00	$17.25	$17.50	$17.75	$18.00
20	.16	.16	.16	.16	.17	.17	.17	.17	.18	.18
40	.31	.32	.32	.33	.33	.34	.34	.35	.35	.36
60	.47	.48	.49	.50	.50	.51	.52	.53	.53	.54
80	.63	.64	.65	.66	.60	.68	.68	.70	.71	.72
100	.79	.80	.81	.83	.84	.85	.86	.88	.89	.90
200	1.58	1.60	1.63	1.65	1.68	1.70	1.73	1.75	1.78	1.80
300	2.36	2.40	2.44	2.48	2.51	2.55	2.59	2.63	2.66	2.70
400	3.15	3.20	3.25	3.30	3.35	3.00	3.45	3.50	3.55	3.60
500	3.94	4.00	4.06	4.13	4.19	4.75	4.30	4.38	4.44	4.50
600	4.79	4.80	4.88	4.95	4.98	5.10	5.17	5.25	5.33	5.40
700	5.48	5.60	5.69	5.78	5.86	5.95	6.04	6.13	6.21	6.30
800	6.30	6.40	6.50	6.60	6.70	6.80	6.90	7.00	7.10	7.20
900	7.08	7.20	7.31	7.43	7.54	7.65	7.76	7.88	7.99	8.10
1000	7.88	8.00	8.13	8.25	8.38	8.50	8.63	8.75	8.88	9.00
1100	8.66	8.80	8.94	9.08	9.21	9.35	9.49	9.63	9.76	9.90
1200	9.45	9.60	9.75	9.90	10.05	10.20	10.35	10.50	10.15	10.80
1300	10.24	10.40	10.56	10.73	10.89	11.05	11.21	11.38	11.54	11.70
1400	11.03	11.20	11.38	11.55	11.73	11.90	12.08	12.25	12.43	12.60
1500	11.81	12.00	12.19	12.38	12.56	12.75	12.94	13.13	13.31	13.50
1600	12.60	12.80	12.95	13.20	13.40	13.60	13.80	14.00	14.20	14.40
1700	13.39	13.60	13.81	14.03	14.24	14.45	14.66	14.88	15.09	15.30
1800	14.18	14.40	14.62	14.85	15.08	15.30	15.53	15.75	15.98	16.20
1900	14.96	15.20	15.44	15.68	15.91	16.15	16.39	16.63	16.86	17.10

Lbs.	$18.25	$18.50	$18.75	$19.00	$19.25	$19.50	$19.75	$20.00
20	.18	.19	.19	.19	.19	.20	.20	.20
40	.37	.37	.38	.38	.38	.39	.39	.40
60	.55	.56	.56	.57	.58	.59	.59	.60
80	.74	.74	.75	.76	.77	.78	.79	.80
100	.92	.93	.94	.95	.96	.98	.99	1.00
200	1.83	1.85	1.88	1.90	1.92	1.95	1.97	2.00
300	2.75	2.78	2.81	2.85	2.89	2.93	2.96	3.00
400	3.66	3.70	3.75	3.80	3.85	3.90	3.95	4.00
500	4.56	4.63	4.69	4.75	4.81	4.88	4.94	5.00
600	5.49	5.55	5.63	5.70	5.78	5.85	5.93	6.00
700	6.39	6.48	6.56	6.65	6.74	6.83	6.92	7.00
800	7.30	7.40	7.50	7.60	7.70	7.80	7.90	8.00
900	8.21	8.33	8.44	8.55	8.66	8.78	8.89	9.00
1000	9.12	9.25	9.38	9.50	9.63	9.75	9.87	10.00
1100	10.04	10.18	10.31	10.45	10.58	10.73	10.86	11.00
1200	10.95	11.11	11.25	11.40	11.55	11.70	11.85	12.00
1300	11.86	12.03	12.18	12.35	12.51	12.68	12.84	13.00
1400	12.76	12.95	13.12	13.30	13.48	13.70	13.82	14.00
1500	13.69	13.86	14.06	14.25	14.44	14.68	14.81	15.00
1600	14.60	14.80	15.00	15.20	15.40	15.65	15,80	16.00
1700	15.50	15.73	15.93	16.15	16.36	16.63	16.79	17.00
1800	16.42	16.65	16.87	17.10	17.33	17.60	17.78	18.00
1900	17.34	17.58	17.81	18.05	18.29	18.58	18.76	19.00

ED. NOTE: We will appreciate it if our readers will draw attention to any errors, typographical, etc., due to miscalculations that may appear above.

SUPERIOR-DULUTH DOCKS

Storage and Handling Capacity of Facilities at Head of Lakes.

Below is some data showing the storage and handling capacity of coal docks at the Head of the Lakes:

Superior.

Berwind Fuel Co., 700,000 tons bituminous; 1,300 tons per hour.
Carnegie Dock & Fuel Co., Dock No. 1, 600,000 tons bituminous; 600 tons per hour.
Great Lakes Coal & Dock Co., 700,000 tons bituminous; 100,000 tons anthracite; 1,000 tons per hour.
M. A. Hanna Coal & Dock Co., 450,000 tons bituminous; 50,000 tons anthracite; 600 tons per hour.
Lehigh Valley Coal Sales Co., 150,000 tons anthracite; 800 tons per hour.
Northern Coal & Dock Co., 500,000 tons bituminous; 70,000 tons anthracite; 600 tons per hour.
North Western Fuel Co., Dock No. 1, 700,000 tons bituminous; 300,000 tons anthracite; 1,450 tons per hour.
North Western Fuel Co., Dock No. 2, 550,000 tons bituminous; 1,000 tons per hour.
Philadelphia & Reading Coal & Iron Co., 240,000 tons bituminous; 160,000 tons anthracite; 1,000 tons per hour.
Pittsburgh Coal Co., Dock No. 5, 800,000 tons bituminous; 200,000 tons anthracite; 600 tons per hour.
Pursglove Coal & Dock Co., 130,000 tons bituminous; 300 tons per hour.
C. Reiss Coal Co., 750,000 tons bituminous; 90,000 tons anthracite; 900 tons per hour.

Duluth.

Berwind Fuel Co., 500,000 tons bituminous; 1,100 tons per hour.
Carnegie Dock & Fuel Co., Dock No. 2, 130,000 tons anthracite; 550,000 tons bituminous; 600 tons per hour.
Clarkson Coal & Dock Co., 400,000 tons bituminous; 60,000 tons anthracite; 700 tons per hour.
Duluth, Missabe & Northern Ry., 600,000 tons bituminous; 1,000 tons per hour.
North Western Fuel Co., Dock No. 4, 400,000 tons bituminous; 100,000 tons anthracite; 600 tons per hour.
Pittsburgh Coal Co., Dock No. 7, 1,000,000 tons bituminous; 80,000 tons anthracite; 1,000 tons per hour.
Fordson Coal Co., 650,000 tons; 20,000 tons anthracite; 650 tons per hour.
Zenith Furnace Co., 375,000 tons bituminous; 750 tons per hour.
Inland Coal & Dock Co., 800,000 tons; 1,000 tons per hour.
The largest coal storage plants in the world are found in the above groups.

French Production.

Year	Coal and lignite Metric tons	Coke Metric tons	Manufactured fuel Metric tons
1913	40,844,218	4,027,424	3,673,338
1923	38,576,815	1,985,735	3,056,376
1924	44,954,749	2,639,178	3,221,201

"BROKER" A MISNOMER

Middlemen Play Role Quite Different from That So Designated.

From time to time the word "broker" recurs in trade news, although, as we have pointed out before, it is a misnomer so far as the coal trade is concerned; the middlemen who, as wholesale merchants, play so important a part in the industry, are not in reality to be so described.

In this connection, and in explanation of our viewpoint, we therefore cannot do better than quote an extended paragraph from the Encyclopedia Britannica:

Relations Between Broker and Principal.

"A broker has not, like a factor, possession of his principal's goods, and unless expressly authorized, cannot buy or sell in his own name; his business is to bring into privity of contract his principal and the third party. When the contract is made, ordinarily he drops out altogether. Brokers very frequently act as factors also, but, when they do so, their rights and duties as factors must be distinguished from their rights and duties as brokers. It is a broker's duty to carry out his principal's instructions with diligence, skill and perfect good faith. He must see that the terms of the bargain accord with his principal's orders from a commercial point of view, e. g., as to quality, quantity and price; he must ensure that the contract of sale effected by him be legally enforceable by his principal against the third party; and he must not accept any commission from the third party, or put himself in any position in which his own interest may become opposed to his principal's. As soon as he has made the contract which he was employed to make, in most respects his duty to, and his authority from, his principal alike cease; and consequently the law of brokers relates principally to the formation of contracts by them."

Fundamentally, the coal trade middlemen buy and sell in their own name, which, the encyclopedia states, is something not done by a broker. His own office and his own stationery constitute the first care of a wholesale coal man, however humble his start. Coal that he sells is bought by him and the responsibility assumed for same at the outset. Rarely is anyone called upon to act as a broker in coal buying or selling on behalf of principals and without assuming individual responsibility.

Record Coke Imports from Germany Into France.

The French control over the Ruhr, which was continued during the first half of 1924, brought shipments of coke from Germany to record proportions. For the year as a whole, Germany supplied 4,540,193 tons, or 84 per cent of the coke imported into France. Declines occurred in the imports from all the other principal countries, those from Great Britain shrinking from 384,000 tons in 1923 to 53,000 tons in 1924, while the tonnage from the United States decreased from 169,000 to 37,000 tons.

The Geological Survey estimates that 38,954,338 net tons of coal were used in public utility power-houses in 1923. Figures for the three preceding years are as follows: 1922, 34,178,907 tons; 1921, 31,585,284 tons; 1920, 37,123,855 tons

TRADE HISTORY OF 1924

Despite Bituminous Slowness New Companies and New Mines Appear on Scene—Other Interesting Features of a Quiet Year.

Some very optimistic New Year's forecasts were made by well-known members of the bituminous trade; also some predictions that the soft coal miners would strike April 1st. But, as it turned out, 1924 was a bad year for prophets as well as profits.

Announcement was made in Boston early in January of the sale of nine large coal-carrying steamers of the Crowell & Thurlow fleet to the New England Fuel & Transportation Co.

The Reynolds Syndicate, which had purchased the controlling interest of the Central Railroad Co. of New Jersey in the Lehigh & Wilkes-Barre Coal Co., organized the Lehigh & Wilkes-Barre Coal Corporation under the laws of Delaware to act as a holding corporation. Charles F. Huber of Wilkes-Barre was elected president.

In January, George M. Jones and Herbert Jones, coal operators of Toledo, Ohio, acquired the mining properties of W. E. Deegans in Logan County, West Virginia.

Several Southern Illinois mining properties were consolidated under the name of the Franklin County Coal Co. early in the new year. H. H. Taylor of Chicago, was selected to head the new corporation.

Harry F. Bovard of Greensburg, Pa., was elected president of the Keystone Coal & Coke Co., to succeed the late Julian B. Huff.

The Maynard Coal Co., with headquarters at Columbus and mines in Ohio and Kentucky, was placed in receivership about January 20th.

At about the same time a receiver was appointed for the Buck Ridge Coal Mining Co., operating an anthracite colliery near Shamokin, Pa.

Before the end of the month still another receivership was announced, that of the Southern Gem Coal Corporation, operating mines in Southern Illinois.

Late in January a strike on the British railroads led to the receipt of numerous inquiries for American coal for shipment abroad but visions of an export boom faded quickly with the settlement of the trouble.

During the winter the anthracite operators opened "coal economy shows" in Washington, Philadelphia, New York and Boston, as part of an educational campaign to inform the public of the merits of the steam sizes. Later in the year permanent exhibitions were established in these cities as well as in Brooklyn, and a traveling exhibit was put on the road to make one-week stands at a score of smaller cities. Devices for burning the small sizes are on display with attendants at hand to explain them and plenty of literature to supply further information along the same line.

An explosion in the McClintock mine of the Crerar-Clinch Coal Co., at Johnston City, Ill., on January 25th, killed 32 men. The next day a similar disaster at the Lancashire No. 18 of the Barnes & Tucker Coal Co., near Indiana, Pa., caused the loss of 36 lives.

Conspiracy Charges Dismissed.

Charges of conspiracy to raise prices made by the Federal Trade Commission in October, 1923, against an independent anthracite mining company and five New York and Boston wholesale firms were dismissed in February when a hearing failed to develop anything of an incriminating nature.

The Sitnik Coal Mining Co. of Philadelphia, purchased the Katherine mine in the Fairmont region from the Antler Coal Co.

Interests identified with the Youghiogheny & Ohio Coal Co. of Cleveland, acquired the property of the Simpson Creek Coal Co. in Northern West Virginia about February 1st. Three mines and 2,700 acres of coal land were involved in the deal.

Officials of the United Mine Workers of America and representatives of the bituminous operators in the Central Competitive Field met at Jacksonville, Fla., on Febuary 11th for a joint wage conference. On February 19th they signed an agreement extending the wage contract for a period of three years from April 1, 1924, without any change in scale or working conditions. Similar action was taken in some of the other unionized soft coal fields including Central Pennsylvania and the Fairmont region. In the latter region, however, many operators refused to subscribe to the terms of the agreement and later in the year reduced wages and worked non-union. Operators in the Kanawha region and Western Kentucky declined as one man to sign the contract and closed their mines. They remained idle until towards Fall, when the Kanawha operators began starting up gradually with non-union labor and on a lower wage scale. Those in Western Kentucky found it more difficult to pursue this course. Considerable disorder occurred in the Fairmont region during the Fall, when the work of deunionizing the mines was put under way in earnest.

At about the same time a new wage agreement was signed in Nova Scotia, granting the miners a 10 per cent increase. This ended a strike which had been on since January 15th, when the old contract expired.

During the Winter the Interstate Commerce Commission investigated anthracite freight rates and also heard testimony bearing on the desirability of establishing joint rates that would permit of the shipment of smokeless coal all-rail to New England, New York State and New Jersey. Nothing was done, however, to force the railroads to make lower rates on anthracite or give the smokeless producers access to New England by the all-rail route.

The W. J. Hamilton Coal & Coke Co., for 25 years a prominent factor in the wholesale trade of Columbus, Ohio, filed a petition in bankruptcy early in March.

An explosion in the No. 2 mine of the Utah Fuel Co. at Castle Gate, Utah, on March 8th, caused the loss of 173 lives.

The Deepwater Coal & Iron Corporation was organized in Alabama to undertake extensive developments in the Warrior River fields. A number of Northern coal men were interested in the new enterprise.

The No. 2 mine of the Yukon-Pocahontas Coal Co., at Yukon, W. Va., was the scene of an explosion on March 28th which cost 26 lives.

The old Boston coal firm of S. P. Burton & Co. was dissolved by mutual consent in April and the business was continued by Edwin L. Furber, one of the former partners, trading under the name of E. L. Furber & Co.

On April 8th Frank L. Burns was elected president of Burns Bros., of New York, the largest retail coal company in the country, succeeding his father, the founder of the business.

On May 1st A. C. Needles became president of the Norfolk & Western Railway Co., one of the largest carriers of bituminous coal, succeeding N. C. Maher, who retired on a pension. Mr. Needles had previously been vice-president in charge of operation and traffic.

One hundred and fifteen men lost their lives on April 28th, when the Benwood Mill mine of the Wheeling Steel Corporation at Benwood, W. Va., blew up.

Receivers for the Jewett, Bigelow & Brooks Coal Co. were appointed on April 16th by the Federal Court at Covington, Ky. This was the parent corporation for 16 subsidiary companies operating mines in Kentucky and West Virginia. It was a $2,000,000 corporation, with headquarters in Cincinnati.

At the annual convention of the National Coal Association in Cincinnati, May 14th-16th, S. Pemberton Hutchinson, of Philadelphia, was elected president.

A consolidation of Southern Illinois mining interests was effected in the Spring by the sale of the Big Creek Coals, Inc., and the Harrisburg Colliery Co., to the Saline County Coal Corporation, a new $2,500,000 company headed by C. I. Pierce of Chicago.

In May the Lehigh & Wilkes-Barre Coal Co. sold its retail distributing plant at Salem, Mass., which it had operated for nearly fifty years, to the George W. Pickering Coal Co.

The Knox Coal Mining Co., the Howe-Coulter Coal Co., and the Panhandle Coal Co., with mines in Indiana capable of producing 1,500,000 tons annually, were merged during May. H. A. Huskey, of Chicago, became president of the new combine.

The Acme Coal & Coke Co., Ltd., of Toronto, was adjudged a bankrupt by the Canadian courts in May. Liabilities were upward of $35,000.

Philadelphia Draws Two Prizes.

Harry K. Cortright, of Philadelphia, was elected president of the American Wholesale Coal Association at the annual convention at White Sulphur Springs, W. Va., June 3rd and 4th. The same week the National Retail Coal Merchants' Association met at Bluefield, W. Va., and re-elected Samuel B. Crowell, also of Philadelphia, to serve as president for another year.

The Lovington Coal Mining Co., of Decatur, Ill., filed a petition in bankruptcy in June.

The Atlantic Coast Collieries, Ltd., a $4,000,000 concern, was organized by Canadian capitalists in July to develop property in the Mabou coal field of Nova Scotia.

During the Summe a considerable number of mining companies in the Fairmont and Kanawha regions, who had refused to sign up with the United Mine Workers on the basis of the Jacksonville wage agreement, started up non-union. Progress was slow, owing to opposition encountered from union labor as well as to the depressed state of the bituminous market, but the output of non-union coal from Northern and Central West Virginia has increased steadily in the last few months. More or less disorder has occurred in the Fairmont region as a result of the successful efforts to inaugurate open-shop operations.

A consolidation of West Virginia mining interests was effected late in July

when interests controlling the West Virginia Coal & Coke Co., of Elkins, took over the Main Island Creek Coal Co., the Logan Mining Co. and the Rich Hill Coal Co., with mines in Logan County.

Charles P. White, of Toledo, Ohio, was appointed chief of the Coal Division of the U. S. Department of Commerce in August.

Non-union operators in the Clarksburg district organized the Central West Virginia Coal Operators' Association late in the Summer, with a view to being in a better position to carry on their fight with the United Mine Workers. The latter organization was, and still is, making every effort to prevent mines in that field being operated except by companies that have signed the Jacksonville agreement and pay the regular union wage scale.

The Reeves Coal & Dock Co., of Minneapolis, was placed in receivership in September.

Another company to go into receivership at about the same time was the St. Louis Coal & Iron Co., a $11,000,000 corporation, with headquarters in St. Louis and mines in southern Illinois.

About 48 men lost their lives in an explosion which occurred on September 16th in the Kemmerer Coal Co.'s mine at Sublet, Wyo.

In September a controversy broke out between John L. Lewis, president of the United Mine Workers of America, and Warren E. Stone, president of the Brotherhood of Locomotive Engineers, over labor conditions at certain coal mines in West Virginia and Kentucky. Mr. Lewis charged Mr. Stone, who is chairman of the Coal River Collieries Co., largely owned by members of the Brotherhood, with refusing to sign the Jacksonville wage agreement and pay the union scale. Mr. Stone replied that the scale was prohibitive in view of the market price of coal, but Mr. Lewis insisted that that was nothing which concerned the miners.

The Matthew Addy Co., an old-established Cincinnati house handling iron, coal and coke, was placed in receivership in September.

During September the Temple Anthracite Coal Co., a new corporation, took over the collieries of the Temple Coal Co. and the East Bear Ridge Colliery Co.,

(*Continued on page* 214)

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two independent anthracite mining interests which had previously been under separate management. F. H. Hemelright, of Scranton, Pa., was president of the consolidation.

Five Western Kentucky mining companies were consolidated about October 1st under the name of the Great Western Coal Co., a new corporation capitalized at $2,000,000. The concerns involved in the merger were the Hawley-McIsaac Co., Inc., the Western Coal Co., the Gideon Coal Co., the Morrison Coal Co. and the Kershaw Coal Co.

The New York wholesale firm of Sandford & Talbot retired from business October 1st after a career of 20 years. C. W. Sandford and G. B. Talbot, the former partners, became associated with W. A. Marshall & Co.

Announcement was made early in October of the sale of the properties of the Otto Marmet Coal & Mining Co., and its affiliated corporations, the Black Betsy Consolidated Coal Co. and the Marmet Halm Coal & Coke Co., to J. C. McKinley of Wheeling, W. V., and associates. The holdings included coal mines and acreage in Putnam, Kanawha and Mason counties, West Virginia, as well as river transportation equipment and coal storage facilities at Cincinnati.

Heavy rains in the anthracite region around October 1st flooded many collieries in the vicinity of Hazleton and Mahanoy City and cut down production for several weeks.

The Quemahoning Creek Coal Co., of Somerset, Pa., was placed in receivership early in October.

Another failure at about the same time was that of the Pennsylvania Collieries, Inc., which was controlled by New York interests and formerly operated mines in Central Pennsylvania.

Around the middle of November the Central Pennsylvania operators, acting through their association, addressed a communication to the union officials of that district suggesting that the miners accept a voluntary reduction in wages as a means of putting the district on a better competitive footing with non-union fields. The proposition was rejected as a similar one made earlier in the year had been.

Two bituminous mining companies with operations in Southwestern Pennsylvania, the Pittsburgh Terminal Coal Co. and the Meadowlands Coal Co., were consolidated in November under the name of the Pittsburgh Terminal Coal Corporation. This followed the segregation of the coal and railroad properties of the Pittsburgh & West Virginia Railway Co., which formerly controlled the Pittsburgh Terminal Coal Co.

A merger of anthracite mining interests was effected at about the same time, when the newly organized South Penn Collieries Co. took over the Von Storch and Legitts Creek collieries, near Scranton, and several other properties, including the Katherine operation of the Trevorton Colliery Co., a few miles from Shamokin. William C. Sproul, a former governor of Pennsylvania, was elected president of the new corporation.

About November 15th Eliot Farley succeeded John F. Bermingham as president of the Delaware, Lackawanna & Western Coal Co., with headquarters in New York. Mr. Farley came from Boston.

On December 8th the United States Supreme Court handed down a decision upholding the Pennsylvania Anthracite Tax Law, which was passed several years ago and had previously been sustained as regards certain features. The most recent decision apparently leaves no question as to its constitutionality.

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FACTS ABOUT OIL HEATING

Furnace Oil More Expensive Than Coal—Latter More Reliable.

The New England Coal Dealers' Association and the New England Wholesale Coal Association have joined forces in combating the use of oil in the home in preference to coal. Perry Barker, one of the leading fuel engineers in New England, has collaborated in the preparation of a statement which is being distributed among dealers and individuals.

The statement discusses "Facts About Oil Heating in the Home." It says:

Safety.

Deputy Chief Caulfield, of the Boston Fire Department, recently addressing the New England Fire Chiefs' Association, said: "Regardless of the careful manufacture of oil-burning devices or how well safeguarded by supervision of the installation, they present a fire hazard. . . . Sixty fires occurred in Boston during the last two heating seasons where oil-burner equipment was directly responsible."

Economy.

Experience has shown that the cost of heating with furnace oil in many New England homes has been equivalent to a cost of heating with domestic-size anthracite coal at $21 to $23 per ton. The interest charge on the oil-burning equipment of better design and material, at five per cent per year, plus the depreciation, is the equivalent of approximately $3 for every ton of coal consumed.

Cleanliness.

Oil is clean in the cellar until the burner clogs, or the supposedly automatic shut-offs fail to operate. Then the cellar and house are often filled with soot and smells. House furnishings have frequently been ruined by this smoke, which loss is not covered by fire insurance policies. Even the highest priced oil burner installations have not been free from this trouble.

Price Outlook.

The furnace oil that is offered for house heating is much more valuable for certain industrial purposes. The constantly increasing demand for this grade of oil, with practically no increase in supply, is likely to mean higher prices.

Reliability of Equipment.

Most of the better types of oil burners require gas or electricity, or both, to operate the system. One day last winter over 1,400 oil burners were out of service for many hours, when the electric power in one of the largest New England cities was suddenly put out of commission. This was repeated many times during the winter in other cities and towns.

Wear on Heaters.

Cast iron furnaces and boilers designed for house heating are built to absorb heat slowly, from a large bed of solid fuel. Oil burners produce an intensive localized heat, which is often developed rapidly, causing excessive expansion and cracking the metal of the sections.

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Deaths in 1924.

Michael W. O'Boyle, independent anthracite operator, of Scranton, Pa., died in Florida, January 12th.

Bernard C. Hendrickson, of Smith & Hendrickson, New York wholesale dealers; January 10th.

W. F. Harman, vice president of the Fort Dearborn Coal Co.; Tazewell, Va., January 15th.

William T. Grier, a former railroad man who was later associated with the anthracite industry; Plainfield, N. J., January 16th.

Herman V. Hesse, coal operator of Fairmont, W. Va., died January 20th.

William H. Swift, a coal man of St. Thomas, Ont., died January 23rd.

William I. Odell, retail coal dealer of Ardsley, N. Y.; February 7th.

W. A. Jewett, veteran anthracite salesman of Elmira, N. Y.; January 22nd.

Edwin Ludlow, former vice president of the Lehigh Coal & Navigation Co., died at Muskogee, Okla., February 10th.

William Flinn, a director of the Pittsburgh Coal Co., died at St. Petersburg, Fla., February 19th.

William L. Allen, president of Scranton Coal Co.; Scranton, Pa., February 17th.

Oakley C. Curtis, president of Randall & McAllister, retail dealers at Portland, Me., died February 22nd.

James Gorman, president of the Killarney Smokeless Coal Co. and affiliated companies, died at Lynchburg, Va.

John W. Trounce, vice-president of the Buffalo & Susquehanna Coal & Coke Co., of Buffalo, died at Toronto on February 18th.

Archer W. Patton, treasurer of the Patton Coal Co.; Fairmont, W. Va., February 25th.

Edgar O. Schermerhorn, formerly prominent in the Boston anthracite trade, died at Newton, Mass., February 19th.

J. Abel Marsh, head of the J. A. Marsh Coal Co., Somerville, Mass., died early in March.

James Meehan, a well-known mining man of Central Pennsylvania; Johnstown, March 10th.

William F. Weber, president of the Weber-Bunke-Lange Coal Co.; New York City, March 16.

W. A. Windatt, of the Windatt Coal Co., Winnipeg, Can., died March 6th.

Henry K. Stauffer, vice-president of the Pittsburgh Terminal Coal Co., Pittsburgh, Pa., died March 13th.

Edward J. McQuail, president of the Coe Pocahontas Coal Co.; Bluefield, W. Va., March 24th.

George F. Lesher, general manager of the West Virginia & Pennsylvania Coal Co., New York, died March 21st.

Henry C. Beury, a retired West Virginia coal operator, died at Ventor, Pa., April 9th.

Harry E. Loomis, president of the National Coal Co.; Cleveland, April 13th.

Michael F. Burns, president of Burns Bros., New York retail dealers, died April 28th.

George A. MacHatton, coal dealer of Brunswick, Me.; April 17th.

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William H. Upson, Sr., coal dealer of Lockport, N. Y.; May 12th.

Joseph B. Van Dusen, Jr., of Van Dusen Bros. & Co., Philadelphia; May 16th.

Frank W. Pray, head of the F. W. Pray Coal Co., Boston; May 28th.

George M. Keiser, an independent anthracite operator, died at Pottsville, Pa., late in May.

George E. Sprague, treasurer of Sprague, Breed, Stevens & Newhall, Inc., Lynn, Mass.; June 6th.

George Seaman, of Collingwood & Seaman, Poughkeepsie, N. Y.; June 18th.

Joseph T. Hilles, of Hatfield & Hilles, Philadelphia; June 26th.

J. Maury Dove, retail dealer of Washington, D. C.; June 26th.

William B. Harris, treasurer of the William A. Jepson Corporation, Boston, died late in June.

Charles M. Lilly, president of the Four Vein Coal Co., Beckley, W. Va.; June 19th.

George Merryweather, veteran Chicago coal man, died July 2nd.

Dan R. Lawson, former Fairmont coal man and more recently identified with the Philadelphia trade, died July 2nd.

Grant Hubley, vice-president Greensburg-Connellsville Coal & Coke Co.; Pittsburgh, July 20th.

Joseph A. Huddleston, president of the Excelsior Pocahontas Coal Co.; Excelsior, W. Va., July 21st.

William R. Tyler, identified with the Philadelphia wholesale trade for many years, died July 25th.

Andrew Cloney, of Cloney & Winton, coal dealers at St. Catharines, Ont.; July 25th.

General Charles B. Dougherty, assistant general manager of the Susquehanna Collieries Co.; Wilkes-Barre, Pa., August 1st.

Melvin J. Googin, veteran dealer of Lewiston, Me., died in August.

Louis C. Langie, of the Langie Coal Co., Rochester, N. Y.; August 5th.

William D. Walbridge, formerly president of the American Coal Co., died at Shrewsbury, N. J., in August.

Gen. Asher Miner, identified with the anthracite trade through the ownership of coal lands, died at Wilkes-Barre on September 2nd.

Pliny T. Sexton, retail dealer of Palmyra, N. Y.; September 5th.

T. J. Walters, general coal freight agent, Baltimore & Ohio Railroad; Baltimore, August 30th.

Farnham Gillespie, of Gillespie Bros., Brockton, Mass.; September 14th.

Blaine Elkins, largely interested in the ownership of West Virginia coal properties, died in Washington, D. C., on September 15th.

Samuel A. Rinn, Central Pennsylvania coal operator; Punxsutawney, Pa., September 15th.

James A. Taylor, coal dealer of Massena, N. Y.; September 9th.

Henry L. Miller, treasurer of the Claflin-Sumner Coal Co.; Worcester Mass., September 21st.

William A. Price, connected with the New York bituminous trade for over 30 years, died late in September.

Norman J. Brooks, a well-known coal salesman in Hudson River territory; Poughkeepsie, N. Y., September 30th.

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Harry N. Taylor, President, U. S. Distributing Corporation.

Isaac F. Overholt, veteran coal and coke operator of Westmoreland County, Pa.; Pittsburgh, October 17th.

James J. Dobbie, general manager of the Cumberland Coal Co.; Davis, W. Va., October 19th.

Harry Olmstead, Sr., assistant general manager of the Houston Coal Co.; Cincinnati, October 24th.

Charles D. Junkins, secretary of the Monongahela Coal Association; Morgantown, W. Va., October 24th.

J. Albert McClane, vice-president of the McClane Mining Co. of Washington, Pa., died in New York on November 3rd.

George E. Barnett, treasurer of Percy Heilner & Son of Philadelphia, died November 10th.

Charles W. Moss, vice-president of the Weaver Coal Co.; Buffalo, N. Y., November 20th.

W. A. Phillips, president of the Pemberton Coal & Coke Co., of West Virginia, died in Philadelphia, December 3rd.

Thomas F. Kelly, general manager of the Irvona Coal & Coke Co., Coalport, Pa., died in Philadelphia, December 7th.

John L. Billard, retired coal dealer and banker of Meriden, Conn.; December 18th.

Charles M. Underhill, long prominent in the Buffalo trade; December 18th.

Fuel Oil for Bunker Purposes.

The amount of fuel oil loaded on vessels engaged in the foreign trade at ports in the United States, by months, during the past six years, was in barrels, as follows:

Month	1919	1920	1921	1922	1923	1924
January	620,149	1,726,428	1,980,963	2,328,190	2,778,440	3,159,496
February ...	682,226	1,548,416	1,997,447	2,422,799	2,526,475	3,144,597
March	715,580	1,724,832	2,462,821	2,620,023	3,140,217	3,069,389
April	861,790	1,844,818	2,176,306	2,713,156	3,173,168	3,598.189
May	1,126,153	1,973,004	2,001,322	2,544,699	3,198,746	3,833,105
June	1,048,059	2,057,420	2,778,339	2,859,342	3,456,628	3,649,847
July	1,023,237	2,378,298	2,437,313	2,614,132	2,986,687	3,813,351
August	1,603,583	2,576,669	2,164,279	2,673,479	3,436,919	3,711,514
September ..	1,143,182	2,474,808	2,253,425	2,796,621	3,256,731	3,645,240
October	1,470,918	2,514,536	2,265,090	2,716,684	3,503,854	4,140,448
November ..	1,814,961	2,837,840	2,167,856	2,742,722	3,140,011	3,524,314
December ..	1,926,508	2,667,714	2,341,919	2,660,408	3,045,613	4,038,285
Total ...	14,031,356	26,334,883	27,076,138	31,692,201	37,581,845	43,327,775

The above figures show that the coal trade engaged in the bunker business has a growing competition to meet with. The consumption of fuel oil for bunker purposes has increased 32,052,058 barrels for the 12 months of 1923, compared with 12 months of 1916, or 579.7 per cent.

Total for 1918 was 6,578,141; 1917, 5,908,319; 1916, 5,529,787 barrels.

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CONNELLSVILLE COKE TRADE

Production Amounted to Slightly More Than Half That in 1923—Tonnage Far Exceeded Output of 1921.

In the year 1924 the Connellsville Region made and marketed 6,668,560 tons of beehive coke which, at the estimated average market price of $3.85 per net ton at ovens, had a gross value of $25,673,956. Contrasted with the immediately preceding year these figures represent a decrease of 6,449,580 tons, or 49.2 per cent, in output, and $51,700,655, or 66.7 per cent, in sales realization, says the *Courier*.

Admittedly a year of highly unsatisfactory market conditions, with respect to demand and prices, the comparison with 1923 emphasizes the "lean" character of the year, but when the records of 1921, the last preceding year of depression, are considered, 1924 presents a less gloomy aspect in perspective than when comparison is made with 1923, a year with the largest production since 1918 and one in which the value of the output was exceeded by only three years in the entire previous history of the region.

In 1921 the depression was more severe, but much less prolonged than in 1924. Production dropped to 3,572,417 tons and the value to $14,538,739, the former the lowest for 35 years and the latter the least in 22 years. By the side of this record, 1924 presents encouraging contrasts, howevermuch the latter may have lacked in the features which made 1923 historic. Last year's production exceeded that of 1921 by 3,096,143 tons, or 86 per cent, while the realized value was $11,134,212, or 76 per cent greater.

In 1922, the year of the sympathetic strike, the production record was materially better than in 1921, and the value, with the third highest price average, was almost three times as great. Last year's tonnage was approximately 1,000,000 tons larger than 1922. In these particulars 1924 is not without some consolation to the producers, at least insofar as the region has again shown its ability to withstand depressions recurring at short intervals and with only one opportunity between them within which to recoup before being struck another heavy blow.

Production.

Although production lacked more than 50 per cent of attaining the 13,104,340 tons mark of 1923, it had a wide weekly range during 1924. At no time, however, did it approach very close to the peak, 306,720 tons, in 1921, the nearest preceding year which was characterized by a serious or more than a temporary depression. Moreover, the lowest week in 1924, 46,320 tons, was but 2,150 tons less than the leanest week, 48,470 tons, during the strike period of the year 1922.

Under the influence of what proved to be over-zealous activity in iron and steel in the first quarter, production gradually rose from 217,850 tons at the opening of the year to 249,250 tons in the second week of March, the high water mark of the year. From thence through the spring and summer months the slump continued with unchanging persistence week after week until the bottom was touched at 46,320 tons in the week ended August 9th. Thereafterward, and until the week following the November election, the improvement continued unabated, but at a relatively slow rate. The effect of the election having been quite early reflected in industry and business, the gains in production became more pronounced and by

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December 1st were scoring at the rate of 10 per cent and greater each succeeding week.

In the Christmas week a wholly new record was established by a reversal of the usual order at this season. Instead of a heavy cut, production made a very considerable increase, pushing the regional total up to 162,710 tons, a gain of 116,390 tons, or 251 per cent, in the 20 weeks immediately following the turn in the tide in the week of August 9th. Christmas week production was 12,000 larger than the week preceding and was within 2,800 tons of the corresponding week in 1923, which had been featured by the historic custom of developing a heavy falling off in consequence of the holiday observance.

The production of the last three working days of the year, embracing the first half of last week, was 94,290 tons, which shows that the weekly rate was continuing to increase and that it had surpassed the rate prevailing at the close of 1923. It had, however, failed by almost 50 per cent in attaining the maximum, 249,250 tons, reached in March.

Average Production Maintained.

A very significant fact of the year was that, despite the acute depression extending over six months or longer, which naturally have been presumed to most seriously affect the merchant operators, this interest was better able than the furnace interest to maintain its average production. Notwithstanding both reached their respective peaks early in March, the drop in merchant production from 89,250 to 30,120 tons in August, representing a decrease of 59,130 tons, or 33 per cent, in the weekly rate, the decline in furnace production, from 160,000 to 15,000 tons, took place within a much shorter period and caused a loss of 135,000 tons, or almost 85 per cent.

From the last week in June until Christmas week the merchants held the leadership in production, sometimes exceeding that of the furnace group by as much as 60 per cent in their contribution to the regional tonnage.

The actual results over the 12 months were that merchant production totaled 3,008,400 and furnace 3,646,160 tons. Compared with 1923, when the merchant production was 5,185,840 tons and furnace 7,918,500 tons, the statistics for 1924 reveal the loss by the former to have been 2,177,440 tons, or 41.9 per cent, as against a loss by the latter of 4,272,640, or 53.8 per cent.

The comparative records of the two districts presents results which are opposite to those in 1923. In that year the Lower Connellsville district increased its share of the output to 5,727,040 tons, a gain of 235.5 per cent. The Connellsville district produced 7,377,300 tons, which was a gain of 86.2 per cent over 1922. In 1924 the Lower Connellsville district's production was 3,101,950 tons, a loss of 2,625,090 tons, or 45.8 per cent. The Connellsville district dropped to 3,552,610 tons, a loss of 3,825,290 tons, or 51.8 per cent.

Low Stocks on Hand.

On January 1, 1924, the stock coke on yards was estimated at 14,500 tons. By December 31st it had been reduced to approximately 500 tons. The difference, 14,000 tons, was part of the outgoing shipments during the year, hence the coke marketed comprised the oven production of 6,654,560 tons from week to week plus the net stock, making the total sales realization 6,668,560 tons.

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141 Milk Street, Boston, Mass.

General Offices: 16 South River Street, Wilkes-Barre, Pa.

The Lower Connellsville district had in 1924 an experience somewhat similar to that during the year 1922. The sympathetic strike was the most general as well as most stubbornly fought in that district, with the result that its normal leadership in production was lost. This was recovered to some extent in 1923, and last year there was another gain in the district's share of the total. From 43.8 per cent in 1923 it rose to 53.3 per cent in 1924. The Connellsville district's production dropped proportionately to 46.7 per cent, as compared with 56.2 per cent in 1923.

The relatively better operating average of the merchant ovens enabled this interest to surpass its record of making 39.5 per cent of all the coke produced in the region in 1923. In fact, the merchants had 45.2 per cent to their credit, or a gain of 5.7 per cent over the preceding year. The furnace ovens suffered a corresponding loss, their production having been 54.8 per cent, against 60.5 in 1923.

Coke Output by Districts.

The estimated production of coke during 1923 and 1924 in short tons by quarters in the two districts was as follows:

Quarter	Conn. 1923	Conn. 1924	Low. Conn. 1923	Low. Conn. 1924	Total 1923	Total 1924
First	1,883,000	1,681,580	1,504,490	1,202,050	3,387,490	2,883,630
Second	2,191,680	946,420	1,727,970	662,110	3,919,650	1,608,530
Third	1,886,900	261,020	1,459,750	451,020	3,346,650	712,040
Fourth	1,415,720	663,590	1,034,830	786,770	2,450,550	1,450,360
Totals	7,377,300	3,552,610	5,727,040	3,101,950	13,104,340	6,654,560

Merchant and Furnace Tonnage.

The production by the respective interests by quarters in 1923 and 1924 in short tons, is shown in the following tabulation:

Quarter	Merchant 1923	Merchant 1924	Furnace 1923	Furnace 1924	Total 1923	Total 1924
First	1,413,860	1,094,770	1,973,630	1,788,866	3,387,490	2,883,630
Second	1,542,910	603,020	2,376,740	1,005,510	3,919,650	1,608,530
Third	1,301,330	458,280	2,045,320	253,760	3,346,650	712,040
Fourth	927,740	852,330	1,522,810	598,030	2,450,550	1,450,360
Totals	5,185,840	3,008,400	7,918,500	3,646,180	13,104,340	6,654,560

Growth in Forty-five Years.

The progress of and the fluctuations in the coke trade of the Connellsville region during the past 45 years or since it assumed importance as an industry, is comprehensively shown in the following tabulation. This gives the total number of available ovens at the close of each year, the annual output, the average price per ton and the gross value:

Year	Total Ovens	Tons Shipped	Average Price	Gross Revenue
1880	7,211	2,205,946	$1.79	$3,948,643
1885	10,471	3,096,012	1.22	3,777,134
1890	16,020	6,464,156	1.94	12,537,370
1895	17,947	8,244,438	1.23	10,140,658
1900	20,954	10,166,234	2.70	27,448,832

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Year	Total Ovens	Tons Shipped	Average Price	Gross Revenue
1905	30,842	17,896,526	2.26	40,446,149
1910	39,137	18,689,722	2.10	39,248,416
1915	38,986	17,921,216	1.80	32,258,188
1917	38,110	17,806,181	6.25	111,288,631
1918	37,061	16,138,590	7.25	117,004,777
1919	35,758	10,254,640	4.70	48,196,808
1920	35,678	10,750,227	8.30	89,226,884
1921	35,473	3,572,417	4.07	14,539,737
1922	35,042	5,675,000	7.15	40,576,250
1923	34,611	13,114,340	5.90	77,374,606
1924	33,070	6,668,560	3.85	25,673,956

Production by Months.

In the following table the monthly production from the two districts is given for the last two years, all in net tons:

Month	Merchant		Furnace		Total Tons	
	1923	1924	1923	1924	1923	1924
January	429,045	369,440	617,585	568,350	1,046,630	937,790
February	436,505	358,800	611,290	562,270	1,048,425	921,070
March	548,310	366,530	744,125	658,240	1,292,490	1,024,770
April	523,060	262,650	747,295	537,770	1,270,355	800,420
May	521,610	183,090	820,935	321,650	1,342,545	504,740
June	498,240	157,280	808,510	146,090	1,306,750	303,370
July	445,120	160,850	751,540	82,240	1,196,660	243,090
August	444,940	133,030	699,850	72,400	1,144,790	205,430
September	411,270	164,400	593,930	99,120	1,005,200	263,520
October	361,600	210,500	553,200	118,930	914,800	329,430
November	278,440	291,350	503,250	160,600	781,690	451,950
December	287,700	350,480	466,360	318,500	754,060	668,980
Totals	5,185,840	3,008,400	7,918,500	3,646,160	13,104,340	6,654,560

Coke Exports from the United States.

Exports of coke from the United States during 1924 and six years previous:

Month	1918	1919	1920	1921	1922	1923	1924
January	84,741	67,526	58,026	37,745	30,732	77,759	53,117
February	83,758	48,806	59,866	27,238	31,534	70,989	55,762
March	146,213	33,749	55,435	25,061	25,435	97,521	112,048
April	140,003	44,883	52,703	18,863	28,413	201,788	45,382
May	146,740	33,299	42,077	15,641	21,798	165,643	40,295
June	141,194	56,533	55,420	19,911	29,090	63,841	48,238
July	145,490	37,703	80,112	19,129	27,686	60,462	48,983
August	131,751	61,714	71,381	18,029	26,121	99,237	42,308
September	132,553	63,771	80,377	17,634	35,472	95,479	41,804
October	118,796	81,962	103,353	22,256	38,613	77,737	55,759
November	146,647	66,873	85,443	30,347	38,397	49,363	57,227
December	93,100	43,320	77,109	23,034	123,442	44,951	56,307
Total	1,506,986	640,139	821,252	274,787	476,733	1,104,770	588,705

These figures show notable fluctuation with 1918 far in the lead.

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Connellsville Coke, Average Monthly Prices.

These monthly averages have been computed from the actual market as shown by transactions and reported in the *Courier:*

Prompt Foundry Coke.

Month	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
January	$1.55	$3.14	$9.44	$6.00	$5.84	$6.00	$5.10	$2.85	$8.30	$5.20
February	1.55	3.41	10.57	6.00	4.72	6.00	4.80	3.10	7.30	5.25
March	1.53	3.45	9.58	6.00	4.05	6.00	4.43	3.38	7.35	5.15
April	1.55	2.45	8.00	6.00	3.71	11.10	3.60	4.44	6.25	5.00
May	1.50	2.34	8.40	6.00	3.80	14.50	3.40	6.50	5.25	4.87
June	1.50	2.54	12.32	6.00	3.92	15.60	3.12	7.50	5.00	4.65
July	1.67	2.65	13.42	6.00	4.06	18.00	2.95	11.35	4.60	4.45
August	1.54	2.75	11.85	6.00	4.32	17.78	2.95	13.35	4.65	4.25
September	1.66	2.94	6.00	6.00	4.42	16.85	3.26	11.50	4.60	4.25
October	2.18	5.69	6.00	6.00	4.60	14.95	3.25	9.70	3.85	4.25
November	2.35	6.91	6.00	6.00	6.05	8.45	3.15	7.35	3.90	4.25
December	2.85	9.00	6.00	6.00	6.81	6.25	2.90	7.75	4.90	4.60
Average	1.79	3.94	9.40	6.00	4.69	11.80	3.58	7.40	5.41	4.68

Prompt Furnace Coke.

Month	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
January	$2.10	$3.90	$10.93	$7.00	$6.85	$7.00	$6.75	$4.00	$9.25	$3.85
February	2.15	4.00	12.10	7.00	5.54	7.00	6.15	4.15	8.50	4.15
March	2.13	3.85	11.90	7.00	4.75	7.00	5.63	4.50	8.60	4.05
April	2.13	3.75	10.12	7.00	4.63	13.10	5.15	5.21	7.80	3.80
May	2.15	3.56	9.90	7.00	4.65	14.00	5.10	6.75	6.50	3.57
June	2.20	3.35	11.70	7.00	4.75	16.00	4.67	7.85	5.85	3.15
July	2.25	3.30	13.42	7.00	5.08	19.00	4.20	11.70	5.60	3.00
August	2.28	3.30	14.25	7.00	6.64	19.15	4.20	15.00	5.55	3.02
September	2.42	3.45	12.55	7.00	6.16	18.25	4.34	13.25	5.90	3.00
October	2.62	5.35	7.00	7.00	6.24	17.25	4.40	11.90	5.30	3.00
November	3.10	9.16	7.00	7.00	7.05	10.60	4.17	8.70	5.25	3.10
December	3.50	10.35	7.00	7.00	7.28	7.75	4.00	8.15	5.25	3.80
Average	2.42	4.78	10.60	7.00	5.72	13.01	4.90	8.43	6.61	3.46

Nova Scotia Coal Production.

Coal production in the Sydney district of Nova Scotia fell off 1,113,000 tons in 1924, according to figures transmitted to the Department of Commerce by Consul H. D. Dick at Sydney. The output of the four leading companies for the last two years is stated, in net tons, to have been as follows:

	1923	1924
Dominion Coal Co.	3,850,000	2,979,039
Nova Scotia Steel & Coal Co.	736,000	593,540
Bras D'or Coal Co.	102,041	68,344
Inverness Ry. & Coal Co.	145,651	78,845
Total	4,833,692	3,719,000

It is said that the strike which began in the early part of 1924 accounted for a large part of the loss, while the closing of the Inverness mines between June 5th and October 25th also lowered the output.

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The Weather at New York.

Official data regarding climatic conditions at New York since the establishment of the Weather Bureau is presented below. The table shows the mean (average) monthly and annual temperatures since the begining of 1871, also the normal temperature of each of the twelve months of the year. It will be seen that one year's weather is pretty much like another; taken as a whole, the law of averages operating to prevent any very radical departure from the normal annual temperature of 52 degrees.

Here are the details:

Monthly and Annual Mean Temperatures.

Year.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
1871....	30.4	31.8	43.6	53.6	60.8	69.1	71.9	73.0	**60.8**	54.9	39.3	29.7	51.6
1872....	29.4	30.3	**28.9**	47.3	61.1	70.6	76.0	75.5	65.2	55.3	40.4	27.4	50.6
1873....	28.1	28.8	35.6	45.7	56.0	68.8	73.5	71.4	64.9	56.3	37.3	36.3	50.2
1874....	34.5	31.4	38.0	**41.3**	58.2	70.0	73.6	70.6	68.1	55.1	42.8	33.8	51.4
1875....	25.3	23.2	32.6	42.6	58.5	67.5	72.7	71.9	64.4	52.3	38.9	33.0	**48.6**
1876....	33.9	31.8	35.2	46.1	58.0	70.7	76.4	72.5	61.8	**49.7**	44.5	25.1	50.5
1877....	27.6	35.6	36.6	48.0	59.0	68.8	73.8	74.3	66.2	56.6	**45.5**	39.3	52.6
1878....	32.1	34.6	43.8	52.7	58.2	65.8	74.6	72.9	67.0	57.4	43.6	32.4	52.9
1879....	26.8	27.6	38.4	45.9	60.8	68.8	73.1	70.9	63.2	59.8	**43.1**	37.3	51.3
1880....	39.8	36.3	35.7	48.7	**64.8**	70.7	73.2	70.7	65.7	53.8	39.7	27.7	52.2
1881....	25.8	29.5	36.9	46.0	60.2	64.2	72.6	73.1	**72.2**	59.1	46.3	40.7	52.2
1882....	30.5	35.6	39.8	46.1	53.5	68.2	73.8	71.7	66.9	58.5	41.7	32.2	51.5
1883....	27.8	31.4	33.6	46.6	59.1	69.5	73.3	70.8	63.1	53.7	45.0	33.7	50.6
1884....	26.2	35.1	37.5	47.6	58.8	68.7	**70.1**	71.5	69.6	56.1	43.2	34.6	51.6
1885....	29.2	**23.1**	29.7	47.7	56.2	67.3	74.2	70.8	64.1	54.5	44.8	36.0	49.8
1886....	25.8	28.5	36.9	50.3	58.5	65.6	72.9	71.0	67.1	56.5	45.3	30.8	51.0
1887....	30.1	33.7	34.3	47.7	62.9	68.2	76.7	71.4	63.1	54.7	43.7	36.1	51.9
1888....	26.0	31.8	32.9	48.4	59.8	71.8	72.6	74.8	66.2	51.2	46.8	36.0	51.5
1889....	37.6	28.0	41.5	51.6	62.0	70.4	73.5	71.5	65.8	52.0	46.9	41.4	53.5
1890....	**40.2**	**40.4**	37.5	51.0	60.6	70.4	73.4	72.3	66.8	55.5	45.9	31.4	53.8
1891....	34.7	37.5	37.8	52.0	59.9	69.6	70.8	73.6	70.1	54.2	43.8	41.8	53.8
1892....	30.3	33.0	34.6	49.9	59.4	72.0	74.8	73.9	66.0	55.4	42.6	**31.3**	51.9
1893....	23.3	29.6	36.2	47.8	59.0	69.4	74.8	74.4	64.4	57.6	44.2	35.1	51.3
1894....	34.6	29.6	44.5	49.6	60.8	70.6	76.1	72.8	69.8	57.2	42.2	36.8	53.7
1895....	30.1	25.2	36.4	47.7	59.4	70.0	70.8	73.8	69.7	51.0	46.0	36.9	51.4
1896....	27.6	30.2	32.1	50.4	63.8	66.5	73.4	73.0	64.8	51.9	48.0	32.1	51.2
1897....	29.4	32.6	39.2	48.6	59.3	65.2	72.8	**71.0**	65.4	56.3	44.1	35.8	51.6
1898....	32.2	33.0	43.7	46.8	56.6	68.9	74.1	74.3	68.9	57.6	44.6	34.4	52.9
1899....	30.8	26.9	38.4	49.6	61.0	**72.2**	73.8	73.6	65.2	58.2	45.4	36.4	52.6
1900....	33.2	31.6	35.0	51.1	60.8	71.4	76.4	**76.8**	70.8	**60.8**	48.7	35.2	54.3
1901....	31.5	25.6	38.6	49.4	58.6	71.4	**78.1**	75.6	68.4	56.0	39.7	34.4	52.3
1902....	29.2	28.5	44.0	50.6	60.2	68.2	73.6	71.4	65.9	56.9	**50.0**	32.2	52.6
1903....	30.6	34.4	**47.5**	52.2	64.1	**64.0**	74.2	**69.2**	65.4	56.6	41.4	30.1	52.5
1904....	24.1	25.0	36.4	46.4	63.6	69.2	73.6	72.2	65.9	53.3	41.4	28.2	49.9
1905....	27.5	24.6	40.0	49.8	60.5	68.8	75.4	72.2	66.8	56.9	43.8	37.7	52.0
1906....	37.3	31.2	34.9	51.7	61.8	71.5	74.8	75.3	70.2	56.1	44.9	32.7	53.5
1907....	32.2	24.4	40.8	45.0	55.3	66.2	74.8	72.0	67.8	52.5	45.2	37.8	51.2
1908....	32.0	28.1	41.4	50.6	61.3	71.6	76.8	72.5	67.8	59.6	44.7	35.2	53.5
1909....	33.2	37.3	38.3	49.5	60.4	70.5	73.4	71.6	65.6	53.2	47.7	31.4	52.7

(*Continued on page 236*)

BITUMINOUS
VICTOR
COAL
REGISTERED U.S. PATENT OFFICE

Produced in Central Pennsylvania Field

Low and Medium Volatile Semi-Bituminous

From mines in Clearfield, Cambria and Indiana Counties, developed and mechanically equipped for an output of four million tons annually.

Shipping to New England and Middle Atlantic States, via Pennsylvania Railroad and New York Central Railroad and their connections.

Tidewater deliveries at Canton Piers, Baltimore, Md., Port Richmond Piers, and Greenwich Piers, Philadelphia, Pa., Port Reading, South Amboy, Elizabethport, Port Liberty and Pier 18, Jersey City, New York Harbor.

ANTHRACITE COAL

Let us give you full particulars about our low and medium volatile select Semi-Bituminous Coals. Write or wire our nearest office.

PEALE, PEACOCK & KERR

One Broadway, New York **North American Bldg., Philadelphia, Pa.**

Operating Offices: **St. Benedict, Cambria County, Pa.**

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
1910....	32.4	31.4	44.7	**54.0**	60.2	68.0	77.8	72.2	68.4	58.2	41.6	28.0	53.1
1911....	34.8	31.4	37.6	48.2	63.6	68.3	76.0	71.8	66.6	55.6	41.4	39.2	52.9
1912....	23.5	28.4	36.8	49.0	60.7	68.4	74.0	70.7	65.9	58.5	46.6	38.5	51.8
1913....	40.0	30.9	44.0	51.0	60.2	69.2	75.0	72.7	64.6	58.2	46.9	38.8	54.3
1914....	31.4	25.3	35.8	46.6	63.6	67.6	71.1	73.7	66.2	59.0	44.0	31.5	51.3
1915....	34.1	35.2	36.4	53.4	57.7	66.6	72.5	70.4	69.0	56.7	45.4	33.5	52.6
1916....	35.4	27.7	32.2	47.1	59.8	64.2	73.8	73.6	66.0	57.2	44.8	33.8	51.3
1917....	32.4	27.8	38.7	47.2	**53.2**	68.3	74.1	74.6	63.0	52.0	41.2	**25.0**	49.8
1918....	**21.6**	29.6	41.2	49.8	64.0	66.4	72.7	74.8	62.8	58.6	45.7	39.0	52.2
1919....	35.2	34.7	42.0	48.8	61.0	69.7	74.0	70.2	66.5	58.4	41.4	30.0	52.8
1920....	24.1	29.1	40.6	47.7	57.8	67.6	72.5	72.8	67.4	60.4	44.2	37.8	51.8
1921....	33.6	34.8	48.3	55.0	60.4	70.3	76.2	70.9	71.0	56.2	45.0	33.8	54.6
1922....	29.0	34.5	41.3	51.0	63.6	70.6	72.7	71.4	67.4	57.6	45.4	34.3	53.1
1923....	31.0	27.1	37.0	49.4	59.3	72.0	72.3	71.3	67.0	55.6	45.4	42.0	52.4
1924....	30.8	29.7	38.2	48.9	59.9	68.8	73.9	72.5	66.4	56.0	44.0	34.3	52.0
Normal.	30.2	30.7	37.5	48.1	59.3	68.5	73.5	72.2	66.5	55.6	44.0	34.4	51.7

NOTE.—Highest and lowest monthly and annual mean temperatures in bold-face figures

Temperature Extremes During 50 Years.

The coldest and warmest days on record for each month of the year at New York are shown below:

	Maximum.			Minimum.		
	Degrees.	Year.	Day.	Degrees.	Year.	Day.
January	67	1890	12	— 6	1875	10
February	69	1890	5	— 7	1918	5
March	80	1921	21	3	1872	5
April	91	1915	27	12	1923	1
May	95	1895	31	34	1880	1
June	97	1899	6	45	1907	2
July	99	1898	3	50	1873	15
August	102	1918	7	51	1885	27
September	100	1881	7	39	1912	30
October	88	1881	1	29	1917	31
November	74	1882	1	7	1875	30
December	68	1891	23	—13	1917	30

It is in this table that great variations appear. There is surely a bewildering array of warm and cold days at various times in the year, the range for each month's extreme being from 52 to 81 degrees and the maximum for the winter months running high above the minimum for the summer months.

While the records cover practically an equal amount of time before and after the year 1900, it is interesting to note that nine maximum records were established in the nineteenth century, leaving only three for more recent years, while minimum records were equally divided between the older years and more recent times. This does not bear out the old saying: "It used to be colder years ago."

An experiment has been tried in one mine which over a two-year period has been successful, in that a prop was constructed by using a two-foot length of white oak for the top and bottom with a center column of Douglas fir. The Douglas fir, it was claimed, cost less delivered to the mine than local prices paid for white oak

The Lehigh Coal & Navigation Co.

Miners and Shippers 1820

For Over a Century 1925

Anthracite

The Best Since 1820

437 Chestnut St., Philadelphia, Pa.

WEATHER VARIATIONS

Average Monthly and Annual Temperatures in Chief Cities of Northern Sector.

The question is often asked, "How much warmer (or colder) is such and such a city?"—as compared with another. Sometimes rather loose comment is made with respect to one place being twice as cold, or as warm, as another one, without any very clear idea, perhaps, of what this statement signifies or indeed any serious thought with reference to the matter, but as the domestic coal trade is so largely governed by weather conditions, a few lines of official data on this subject may be interesting as current information and for reference also.

We, therefore, present a table showing the average temperature month by month at leading cities of the United States and in the adjacent section of Canada, compiled from the official records of the Weather Bureau, as follows:

Monthly and Annual Mean Temperature.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
Boston	27	28	35	45	57	66	71	69	63	52	41	32	48 5/6
Buffalo	25	24	31	42	54	65	70	69	63	52	39	30	47
Chicago	24	25	34	46	56	66	72	71	65	53	39	29	48 1/3
Cincinnati	30	32	41	52	63	72	76	74	67	55	43	34	53 1/4
Cleveland	26	27	34	46	58	68	72	70	64	53	40	31	49 1/12
Detroit	24	25	33	46	58	68	72	70	63	52	39	30	48 1/3
Montreal	12	14	24	40	55	65	68	66	58	45	32	18	41 5/12
New York	30	31	38	48	59	68	74	72	66	56	44	34	51 2/3
Philadelphia	32	33	40	51	62	71	76	74	67	56	45	36	53 7/12
Pittsburgh	31	32	40	51	63	71	75	72	66	55	43	35	52 5/6
St. Louis	31	34	44	56	67	75	79	77	70	58	45	35	55 11/12
St. Paul	12	15	28	46	58	67	72	70	60	48	31	19	43 5/6
Toronto	22	21	29	41	53	63	68	67	59	46	36	26	44 1/4
Washington	33	34	42	53	64	73	77	74	68	57	45	36	54 2/3

There are many ramifications of such a topic; many points that might be enlarged upon, extending an article beyond the space at our command. Perhaps we might mention as a salient feature the difference in monthly comparative figures; for instance, Pittsburgh and St. Louis have the same weather in January and December, but while Pittsburgh is hot enough in the summer time, St. Louis is still hotter.

It is interesting to note also that while Montreal is 18 degrees colder than New York in January, the spring advances with rapid strides and in June there is only a difference of three degrees; partly because of the effects of long daylight in the more northerly city in the month of June. Some of the differences might be reconciled in a measure were the figures carried out in decimals. The Weather Bureau uses the nearest whole number; for instance, taking the figures 71.4 and comparing with 72.6 there is an actual difference of 1.2, whereas the Bureau would compare 71 and 73, a difference of two degrees.

(*Continued on page 240*)

The Delaware, Lackawanna & Western Coal Company

SOLE VENDERS OF

ELIOT FARLEY, President
H. A. SMITH, Vice-President
S. G. MEMORY, Vice-President

120 BROADWAY, NEW YORK

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120 Broadway, New York

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Scranton Life Bldg., Scranton, Pa.

John J. Town, Sales Agent,
64 Martin Building, Utica, N. Y.

H. W. Marshall, Salesman,
1620 W. Fayette Street, Syracuse, N. Y.

The Elias Rogers Co., Limited,
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Canada Cement Bldg., Montreal, Que.

E. H. Read, Sales Agent,
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W. B. Palmer, Sales Agent,
Penobscot Building, Detroit, Mich.

Hedstrom-Schenck Coal Co., Sales Agents,
Old Colony Building, Chicago, Ill.

Milwaukee-Western Fuel Co.,
Sales Agents,
14th Floor, Wells Bldg., Milwaukee, Wis.

North Western Fuel Co., Sales Agents,
Merchants' Natl. Bank Bldg., St. Paul,
Duluth, Minn. Superior, Wis.

St. Louis and Montreal the Extremes.

While our first tabulation, in alphabetical arrangement, will be found convenient for ascertaining the average temperature in certain of the large cities, a table showing an arrangement of the several places in order, from the warmest to the coldest, may also be interesting and a more ready means of making comparison. Accordingly we present the following data showing the seasonal (coldest and warmest) and the annual mean temperatures in the cities selected:

Cities	Degrees Cold Month		Degrees Hot Month		Average
St. Louis	January	31	July	79	55 11/12
Washington	January	33	July	77	54 2/3
Philadelphia	January	32	July	76	53 7/12
Cincinnati	January	30	July	76	53 1/4
Pittsburgh	January	31	July	75	52 5/6
New York	January	30	July	74	51 2/3
Cleveland	January	26	July	72	49 1/12
Boston	January	27	July	71	48 5/6
Detroit	January	24	July	72	48 1/3
Chicago	January	24	July	72	48 1/3
Buffalo	February	24	July	70	47
Toronto	February	21	July	68	44 1/4
St. Paul	January	12	July	72	43 5/12
Montreal	January	12	July	68	41 5/12

One of the interesting features of the above is the close accord between the weather of Detroit and Chicago. Another interesting feature is that Boston has almost the same annual temperature as the western city noted for its winds and winter cold, while Buffalo, within the Empire State, and not particularly far north, is exceeded in frigidity by only one of the large cities of the United States.

Power Houses Used Less Coal in 1924.

According to statistics gathered by the U. S. Geological Survey, the total production of electricity by public-utility power plants in 1924 was 58,996,000 kilowatt-hours, six per cent larger than for 1923. The output by the use of water power was 33.9 per cent of the total, a reduction of about one per cent from the 1923 figure. Amount of coal used decreased nearly four per cent.

The continued increase in efficiency in the use of fuel is shown by the reduction of one-fifth of a pound of coal used to generate a kilowatt-hour of electricity in 1924, as compared with 1923. It would have required about 3,900,000 more tons of coal to generate the output of electricity in 1924 by the use of fuels at the 1923 rate per kilowatt-hour.

Average daily production of electricity in December was 177,600,000 kilowatt-hours, about 5½ per cent larger than the average for November, 1924, and 11.6 greater than the average for December, 1923.

The output of electricity by public-utility power plants in December, 1924, was by a considerable margin the largest ever produced in any previous month.

The Philadelphia & Reading Coal & Iron Company

MINERS AND SHIPPERS OF

FAMOUS READING ANTHRACITE

Hard White Ash, Free Burning White Ash,
Shamokin, Lorberry, Red Ash,
Lykens Valley, North Franklin.

General Office, Reading Terminal, **Philadelphia, Pa.**
R. J. Montgomery, *Vice President and General Coal Agent*

Branch Offices:

New York	**Boston**	**Buffalo**	**Chicago**
Milwaukee	**Minneapolis**	**St. Paul**	**Rochester**
Baltimore	**Washington**	**Reading**	**Detroit**

COAL AND OIL COSTS

Manufacturing Concern Shows Substantial Saving by Using Coal—Details Based on Careful Records Are Presented.

The following figures bearing on the relative cost of operating an industrial plant by coal and oil are made available to the readers of SAWARD'S ANNUAL through the courtesy of the New England Wholesale Coal Association, and are based on the records of a manufacturing concern that has carefully worked out the coal vs. oil problem:

(1) Cost of *Oil* for 12 months ending October 31, 1924—71,594 barrels—actual cost $125,504.09
Coal cost (assuming 3.86 barrels oil is equivalent to 1 ton coal)—18,547 tons at $3.77..... 69,922.19

(2) Wages:
OIL: 1 head fireman at 54c. per hour—11 hours..... $5.94
1 fireman at 50c. per hour—11 hours..... 5.50
2 firemen at 50c. per hour—13 hours..... { 13.00 night
{ 11.44 day
$24.44 per 24 hours
365 days × $24.44 = $8,920.60
COAL: Firemen—2 days and 2 nights as above..... $24.44
2 men handling coal and ashes (1 day and 1 night) 12 hours each at 50c..... 12.00
1 conveyor man (day only) at 50c..... 5.50
$41.94 per 24 hours
365 days × $41.94 = $15,308.10
Allow for handling frozen coal..... 500.00
$15,808.10

(3) Auxiliary power:
OIL: Steam costs 38c. per 1,000 lbs. Oil pump takes 2 hp. at 125 lbs. steam per hour = 250 lbs. steam per hour. 24 hours per day × 250 lbs. = $2.28. 365 days × $2.28 = ... $832.20
COAL: Steam costs 22c. per 1,000 lbs. Forced draft fan steam consumption 75 lbs. per hp. per hour. 75 lbs. steam × 50 hp. × .22 cost steam × 24 hours = ... 19.80
$19.80 × 365 days = 7,227.00
3 stoker engines at 25 hp. each—7.5 hp. 7.5 × 75 × 24 × .22 × 365..... 1,084.05
Coal conveyor motor..... 432.00
Ash skip motor..... 144.00
$8,887.05

(4) Repairs:
OIL: Repairs on runners, etc..... $180.10
COAL: Stokers (4) $1,440.00
Coal conveyor 600.00
Ash skip 240.00
$2,280.00

(*Continued on page* 244.)

G. B. ST. GEORGE.
President

L. V. BERMINGHAM,
Secretary and Treasurer

Telephone
Hanover 2690

ST. GEORGE COAL CO.

149 BROADWAY,
NEW YORK

Anthracite
Bituminous

D., L. & W. COAL CO.
P. & R. COAL & IRON CO.
LEHIGH VALLEY COAL SALES CO.

(5) Depreciation:

OIL: Oil equipment $35,000.00 at 6 per cent.....$2,100.00
(Depreciation now provided for at 4 per cent per annum)

COAL: Coal and ash handling plant and stokers, $90,000.00 at 6 per cent.....$5,400.00

SUMMARY

		Oil	Coal
(1)	Fuel cost	$125,504.09	$69,922.19
(2)	Wages	8,920.60	15,808.10
(3)	Auxiliary power	832.20	8,887.05
(4)	Repairs	180.00	2,280.00
(5)	Depreciation	2,100.00	5,400.00
		$137,536.89	$102,297.34
	Credit for ashes (at $1.50 per 5-ton truck) 2 loads per day = $3.00 × 300 days		$900.00
			$101,397.34

OIL $137,536.89
COAL 101,397.34

Net saving $36,139.55 per year, coal over oil.

Port Reading Coal Dumpings.

Figures made public by the Reading Company show that 2,713,458 tons of coal was loaded into boats during 1924 by the McMyler car-dumping machine at Port Reading, N. J., in New York harbor. This tonnage, which includes both anthracite and bituminous coal, does not represent the total business of the port, for an additional amount was handled over the old-fashioned trestle piers. Below are some further details regarding the operation of the Port Reading car dumper during the calendar year 1924:

Number of cars dumped	55,850
Number of boats loaded	4,256
Number of days worked	306
Average number of hours each working day	9⅓
Average daily dumping for entire year	182½ cars
Average number of boats loaded	14
Average tonnage of boats loaded	637½
Average car capacity cars dumped	48.12 tons

The origin of petroleum in nature is still undetermined. It might well have been formed from the vegetable matter that is now represented by coal beds, but for the fact that there is much more hydrogen in the petroleum than in the gases from the vegetable remains. Recent experiments tend, however, to support this idea. By exposing coal to hydrogen under a pressure of 5,000 pounds to the square inch, remarkable exothermic reaction takes place that results in a fluid indistinguishable from crude petroleum. This opens up an interesting field for speculation as to the possibility of converting solid fuel to liquid fuel on a commercial scale.

LEHIGH VALLEY COAL SALES CO.

shippers of

LEHIGH VALLEY ANTHRACITE

The Coal That Satisfies

WYOMING HAZLETON LEHIGH
PACKER CROSS CREEK

GENERAL OFFICES:

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ROCHESTER—Wilder Bldg.
CLEVELAND—Cuyahoga Bldg.
DETROIT—Ford Bldg.
CHICAGO—McCormick Bldg.
MINNEAPOLIS—Security Bldg.
MILWAUKEE—First Wisconsin National Bank Bldg.

CLINKERS PREVENTABLE

Can Usually Be Avoided by Observing a Few Simple Rules in Firing.

What is clinker and what is the cause?

Clinker (as commonly used in connection with coal ash) is fused or melted ash. Coal ash is composed chiefly of the oxides of calcium, silicon, iron, aluminum and titanium. When the temperature is reached which causes the ash to fuse and run together, we have what is commonly termed a clinker. This fusion point temperature of the ash varies in different coals from 1,800° F. to 3,000° F.

Coals with fusion of ash around 2,800°-3,000° F. seldom clinker for the reason that the fusion temperature is rarely reached or exceeded. They are often referred to as high fusion ash, or non-clinkering coals.

Coals with fusion of ash from 1,800°-2,300° F. are said to be low fusion ash coals, and cause most of the troublesome clinker and resulting losses in the power plant.

Many plants, on account of geographical location, are using the lower fusion ash coals. The question naturally arises: Can clinkering be eliminated? Generally speaking, No. But usually it can be reduced to a minimum by proper handling of the fires.

Keep the fuel bed thin and avoid disturbing it as much as possible. It takes a certain amount of air to burn a given amount of coal, and just shoveling in coal won't produce heat. I have noted several cases where the fires were 20 to 26 inches deep. Very few coals will stand this condition. Not only does it reduce the air supply by offering more friction to passage of the gases, but a reducing atmosphere is encountered which usually causes the ash to clinker at a lower temperature (50°-200°) than is the case where an oxidizing condition exists. That is, an atmosphere which supplies oxygen.

Agitating the fire causes the ash particles to be thrown into and through the combustion zone of the fire bed. The high temperature causes the ash to fuse and clinker to form. If you are troubled with clinker, don't stir the fire more than is absolutely necessary. In the case of hand-fired stationary grates, run a slash bar or hook over the grate surface, but don't break up the fuel bed. This will remove the ash without mixing it through the combustion zone.

Keep the fuel bed thin and fire often. This requires more skill on part of fireman, especially on hand-fired furnaces. But a fireman is proud of his skill, and especially so when proper recognition is given by the management.

Keep the ash-pit doors open unless you are using forced draft equipment. If it is necessary to regulate the draft, use the dampers in the breechings.

Cool air entering under the grates tends to cool them and reduce the temperature of the ash on the grates. This helps prevent formation of clinker. Anything that increases the temperature of the grates tends to increase the clinker. This is seen when fine coal sifts into and burns in ash pit under the grates. This invariably causes a bad clinker. Either keep the ash pit free from coal or cover the bottom of pit with water. Water in ash pit prevents fires under the grates, and the steam formed tends to break up the clinker and keep it from sticking to grates.

Troublesome clinker can usually be avoided by: (1) Keeping the fires thin; (2) Avoid excessive stirring; (3) Avoid burning coal in ash pits, and (4) Use draft control in breeching.

Knickerbocker Fuel Co.

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HIGH and LOW VOLATILE STEAM
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ELIMINATION OF SMOKE

This Result Can Be Obtained by Observing a Few Simple Rules.

Many of us have wondered about smoke and why some plants are able to burn coal with very little visible smoke, while others produce an enormous amount.

Smoke may be said to consist chiefly of small particles of carbon, together with certain amounts of tar vapor. When studied under a microscope these small particles of soot seem to be made up of many smaller particles. Grouped together they appear something like a snow flake.

One can gain some idea as to the size of these minute pieces of carbon from the fact that it takes hundreds of thousands to cover an inch. Grouped together these particles form pieces which are easily visible to the naked eye.

Studying the formation of smoke and soot, we find that the greatest part is formed on the surface of the fire bed, or a short distance above the fire bed. The particles are small and are easily moved and carried away by light air currents.

Two Conditions Necessary.

For combustion of coal with little or no smoke two conditions are necessary.

1. Temperature of 2,500 degrees to 3,000 degrees F.
2. Ample air supply, and an intimate and continuous mixing of air, gases and soot and smoke particles in suspension.

Temperatures of 2,500 degrees-3,000 degrees F. heat the particles to a luminous degree, and to a point where combustion will take place if sufficient oxygen is present. Looking into a fire box that has recently been fired, you note a luminous flame over the coals. This is due to the highly heated carbon and tar particles.

Naturally, one would think that at a high temperature and in the presence of sufficient air, these smoke particles would all burn up. However, experiment has shown that this will not usually be the case. It takes an intimate mixing of the air, gases and floating carbon particles, at a high temperature, to consume the smoke or small carbon particles.

From this it will be seen that it is possible to burn up the small particles of carbon and tar. When this is done we have little or no visible smoke.

Under ordinary boiler conditions coal can be burned with little or no smoke, and at the same time a higher efficiency may be obtained. Most modern stoker equipment is designed for slow, uniform feeding of the fuel, with sufficient air and agitation; the result is little or no smoke.

Rules for Hand-Fired Plants.

On hand-fired plants a minimum amount of visible smoke will be obtained when we fire light and often, and keep the fuel bed thin and uniform. To secure sufficient air it may be necessary to admit air through the bridge wall. To secure the proper agitation or mixing of gas, air and carbon particles, some mechanical means may be necessary, such as checker work in the combustion chamber or high velocity steam air jets. The latter are usually placed above the fire doors in the front wall. Valves can be arranged so that the jets operate for a few minutes after each firing. When properly arranged, this is a very efficient smoke eliminator.

If you are troubled with smoke, you can materially reduce the visible smoke by:

(*Continued on page* 250.)

The Morrisdale Coal Co.

Miners and Shippers of

MORRISDALE BITUMINOUS STEAM COALS

Steamship Bunkering a Specialty

General Office:

Real Estate Trust Building, Philadelphia

New York:
17 BATTERY PLACE

London
LAMBERT BROTHERS, Ltd.

PITTSBURGH COAL COMPANY

PITTSBURGH, PA.

SALES OFFICES IN ALL THE PRINCIPAL CITIES

The Largest Commercial Producers of Bituminous Coal.

GAS COAL - STEAM COAL
BY-PRODUCT COAL - DOMESTIC COAL
RAIL OR LAKE SHIPMENTS
BUNKERING FACILITIES.

1. Maintaining a temperature high enough for the ignition of the combustible carbon and tar particles 2,500 degrees-3,000 degrees F.

(Don't allow the fires to get too low before supplying additional fuel.)

2. Provide ample air supply with intimate mixing of air and gases.

A study of your plant conditions by a fuel engineer, who forms part of the personnel of some of the larger coal companies and boiler companies, tagether with the co-operation of the plant firemen, will reduce or eliminate your visible smoke.

GAS AND ELECTRICITY

Enormous Growth in Total and Per Capita Use Since 1910.

Of trade interest because of its bearing on coal consumption is the announcement by the New York State Committee on Public Utility Information that in 1924 more than ninety billion cubic feet of gas and ten billion kilowatt-hours of electricity were produced in this State. These figures exceed by a considerable margin those of any previous year.

It is asserted that more than one-half of all the food consumed in the State is prepared on gas stoves. About one-fourth of the gas manufactured is now used industrially to replace other fuels, chiefly coal. This industrial use of gas is almost wholly a development of the last decade and has increased at a rate of about twenty-five per cent a year.

The distribution of electrical energy during 1924 shows an increase of about one billion kilowatt-hours over the record for 1923.

Tabulated records taken at four-year intervals since 1910, together with the number of persons served by the gas and electric utilities of the State, show not only a steady growth in the use of these two services but an increasing per capita consumption, rising, in the case of gas, from 6,500 to 10,000 cubic feet, and in the case of electricity from 273 to 940 kilowatt-hours a year.

Steady Expansion Shown.

A table showing the development of gas and electric service in New York State, compiled from the committee's figures, is as follows:

	Gas, Cubic Feet	Population Served	Per Capita Cubic Feet
1910	46,000,000,000	7,100,000	6,500
1914	52,000,000,000	7,700,000	6,750
1918	62,800,000,000	8,300,000	7,500
1922	76,600,000,000	8,800,000	8,750
1924	92,000,000,000	9,200,000	10,000
	Electricity Kw.-hours	**Population Served**	**Per Capita Kw.-hours**
1910	2,350,000,000	8,600,000	273
1914	3,600,000,000	9,180,000	392
1918	4,625,000,000	9,760,000	474
1922	7,420,000,000	10,350,000	715
1924	10,000,000,000	10,650,000	940

The increase in the above figures is surely impressive.

Crozer-Pocahontas Company

1510 Chestnut Street
PHILADELPHIA

Shippers, Exporters and Bunker Suppliers of

Standard Pocahontas Coal

2,000,000 TONS ANNUALLY

CHICAGO
1105 Fisher Bldg.

CROZER

BLUEFIELD, W. VA.
Law & Commerce Bldg.

NORFOLK, VA.
Citizens Bank Bldg.

MEEKER & COMPANY

INCORPORATED

143 Liberty Street New York, N. Y.

Silver Brook Lehigh,
Laurel Lykens Valley,
Wyoming Valley

SAULT CANAL COAL SHIPMENTS

Bituminous Tonnage Shows Big Decrease Compared with 1923 and Anthracite Also Shows Loss.

Official statistics of vessel movements through the Sault Canal in 1923 and 1924 show coal tonnage as follows:

Anthracite.

	United States Canal		Canadian Canal		Total		
Month	1923	1924	1923	1924	1922	1923	1924
April ..	.....	79,900	.....	.....	5,000	.....	79,900
May ...	239,360	61,084	2,100	.....	2,100	241,460	61,084
June ...	296,138	205,342	.....	.....	.....	296,138	205,342
July ...	349,424	302,879	4,500	8,000	6,052	353,924	310,879
August .	222,741	402,819	9,982	.....	.....	232,723	402,819
September	72,461	177,270	1,000	4,500	10,805	73,461	181,770
October.	200,600	57,850	.....	.....	267,744	200,600	57,850
November	230,250	100,400	8,550	5,785	281,746	238,800	106,185
December	48,900	30,800	.....	3,072	97,000	48,900	33,872
Total..	1,659,874	1,418,344	26,132	21,357	670,447	1,686,006	1,439,701

During the season of navigation the tonnage of anthracite passing through the "Soo" Canal decreased 246,305 tons or 14.6 per cent compared with the movement of 1923.

Bituminous.

	United States Canal		Canadian Canal		Total		
	1923	1924	1923	1924	1922	1923	1924
April ..	.....	402,310	.....	175	109,000	.....	402,485
May ...	2,603,312	1,135,098	19,045	3,300	202,988	2,622,357	1,138,398
June ...	2,705,037	1,486,084	22,700	7,675	247,542	2,727,737	1,493,759
July ...	2,757,269	1,897,862	14,440	165	172,365	2,771,709	1,898,027
August .	2,557,659	1,999,553	21,566	40	185,221	2,579,225	1,999,593
September	1,908,669	1,764,301	36,675	12,360	2,353,748	1,945,344	1,776,661
October.	1,999,719	1,634,575	31,365	8,733	2,688,924	2,031,084	1,643,308
November	902,506	1,543,792	15,743	4,520	2,454,736	1,918,249	1,548,312
December	113,600	225,709	.....	.....	376,050	113,600	225,709
Total.	16,547,771	12,091,284	161,534	36,968	8,790,571	16,709,305	12,126,252

Bituminous tonnage to the Northwest passing through the "Soo" Canal during the season of 1924 decreased 4,583,053 tons or 27.4 per cent compared with 1923.

Shipments through this channel during a term of years have been as below:

1913.....	18,622,038	1917.....	18,298,853	1921.....	14,763,135
1914.....	14,487,221	1918.....	17,981,610	1922.....	9,468,018
1915.....	13,357,058	1919.....	13,874,951	1923.....	18,395,311
1916.....	16,123,119	1920.....	14,156,259	1924.....	13,565,953

Jerome Watson, chief of the Ohio Mining Department, reports that 98 Ohio miners lost their lives in 1924 in contrast with 130 in 1923.

DICKSON & EDDY

ESTABLISHED 1890

17 Battery Place, New York City

Anthracite COAL Bituminous

SCRANTON COAL COMPANY
WEST END COAL COMPANY
PRICE-PANCOAST COAL COMPANY

HIGHEST GRADE
BITUMINOUS COALS
FOR ALL PURPOSES

BRANCH OFFICE: 60 CONGRESS STREET, BOSTON, MASS.

CORY MANN GEORGE

CORPORATION

COAL

26 BEAVER ST., NEW YORK

Tonnage, Value and Freight Through "Soo" Canal.

Year.	Total Value (Hard and Soft Coal).	Anthracite, Per Ton.	Bituminous, Per Ton.	Freight Per Ton.	Total Coal.
1887	$4,735,454	*$3.50	*$3.50	$0.90	1,352,987
1888	7,367,644	* 3.50	* 3.50	.70	2,105,041
1889	5,702,190	* 3.50	* 3.50	.47	1,629,997
1890	7,619,238	* 3 50	* 3.50	.45	2,176,925
1891	8,776,362	* 3.50	* 3.50	.43	2,507,532
1892	10,164,931	* 3.50	* 3.50	.41	2,904,266
1893	10,528,420	* 3.50	* 3.50	.40	3,008,120
1894	8,191,917	* 2.93	* 2.93	.40	2,797,184
1895	6,993,351	4.25	2.40	.37	2,574,362
1896	8,452,073	4.75	2.50	.32	3,023,340
1897	9,456,824	5.50	2.60	.30	3,039,172
1898	10,334,461	4.75	2.40	.25	3,776,450
1899	12,854,278	5.70	2.60	.46	3,940,887
1900	14,620,840	5.25	3.00	.44	4,486,977
1901	15,492,226	5.60	2.90	.38	4.593,136
1902	16,570,398	6.25	3.25	.45	4,812,478
1903	24,898,407	5.80	3.15	.53	6,937,633
1904	19,657,221	5.50	2.60	.40	6,454,869
1905	20,706,302	5.60	2.75	.33	6,509,056
1906	25,136,044	5.75	2.50	.35	8,739,630
1907	34,461,584	5.80	2.60	.31	11,400,095
1908	28,868,837	5.47	2.50	.30	9,902,460
1909	29,044,855	5.47	2.50	.31	9,940,026
1910	41,392,801	5.30	2.75	.31	13,513,727
1911	48,552,057	5.85	2.75	.31	15,332,876
1912	49,303,871	6.00	2.85	.30	14,931,594
1913	58,927,341	5 85	2.70	.30	18,622,938
1914	46,173,087	5.85	2.70	.30	14,487,221
1915	42,359,320	5.80	2.70	.30	13,357,058
1916	55,916,681	6.10	3.05	.30	16,123,119
1917	99.271,727	6.50	5.25	.45	18.298.853
1918	94.964,144	8.00	4.90	.48	17,981,610
1919	74,079,978	8.85	4.60	.42½	13.874,951
1920	119,000,000	11.00	8.00	.52	14,156,259
1921	95.000.000	11.50	5.50	.52	14 763.155
1922	70,500,000	10.75	7.20	.45	9.461,018
1923	102,429,800	11.20	5.00	.45	18,395,311
1924	69,306,000	11.50	4.35	.37	13,565,953

***Average price for Anthracite and Bituminous coal combined.**

General Electric Co. reports that the estimated number of incandescent lamps, exclusive of miniature, such as used in automobile flashlights, etc., sold in the United States during 1924, was 278,000,000. This is an increase of 33,000,000, or 13½ per cent over the previous year, and more than 4½ times as many lamps as sold in 1908.

H. B. W. HAFF

1 BROADWAY NEW YORK

Miners' Agent and Shipper of

HIGHEST GRADE

ANTHRACITE

AND

BITUMINOUS

COALS

SHIPPER OF THE CELEBRATED

MARIETTA SMOKELESS COAL

Especially Adapted for Steamship and Factory Use

Capacity: 1,000,000 Tons Annually

STEAMSHIP BUNKERS SUPPLIED AT SHORTEST NOTICE

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"EUREKA"

The Best Fuel for Manufacturing, Steamship and Railroad Use

EUREKA BITUMINOUS and BERWIND'S NEW RIVER and POCAHONTAS SMOKELESS Coals

also

Ocean Westmoreland Gas Coal

MINED AND SHIPPED BY

THE BERWIND-WHITE COAL MINING COMPANY

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Maritime Coaling Co., Agents
No. 4 North Ferry Ave., East Boston, Mass.
Peoples Gas Bldg., Chicago, Ill.
Keyser Bldg., Baltimore, Md.

SHIPPING PIERS

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STEAMSHIP FUEL CORPORATION

SANDERS A. WERTHEIM, President

33 RECTOR ST., NEW YORK

Anthracite — Bituminous

Quality
Facilities

Integrity
Dependability

OPERATORS AND SHIPPERS
ALL RAIL AND TIDEWATER

BUNKERING CONTRACTORS AT ALL ATLANTIC PORTS

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